

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918

CITY of
SPRINGFIELD



Date: 9-30-97 Fax #: 314 692-8810
To: BRYAN BATLIN, TERRACON
From: KAREN CHANDLER

Message: BRIAN, THIS IS AN UPDATE OF THE MEMO
I SENT CHERYL. IF YOU HAVE ANY QUESTIONS,
GIVE ME A CALL.

Pages to follow: 4

(Through 9-29-97)

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918

**CITY of
SPRINGFIELD**



Date: 10-17-97 Fax #: 314-692-8810

To: CHERYL HAINES, TERRA CON

From: KAREN CHANDLER

Message: UPDATE OF MEMO ABOUT TOTAL STATION

Pages to follow: 8

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918

CITY of
SPRINGFIELD



Date: 9-30-97 Fax #: 573-526-3350

To: ALAN REINKEMEYER, MDNR

From: KAREN CHANDLER

Message: UPDATE OF MEMO ABOUT TOTAL STATION.

Pages to follow: 4

(Through 9-29-97)

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918



Date: 10-17-97 Fax #: 573-526-3350

To: ALAN REINKEMEYER, MONR

From: KAREN CHANDLER

Message: UPDATE OF MEMO ABOUT TOTAL STATION

Pages to follow: 8

Public Works Department

*Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802*

*Phone: 417/864-1923
Fax: 417/864-1918*



Date: 9-30-97 *Fax #: 831-6258*

To: LEE SCHAEFER, SUNBELT

From: KAREN CHANDLER

Message: UPDATE OF MEMO ABOUT TOTAL STATION

Pages to follow: 4

(Through 9-29-97)

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918

CITY of
SPRINGFIELD



Date: 10-17-97 Fax #: 831-6258

To: LEE SCHAEFER, SUNBELT

From: KAREN CHANDLER

Message: UPDATE OF MEMO ABOUT TOTPL STATION

Pages to follow: 8

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918

CITY of
SPRINGFIELD



Date: 10-3-97 Fax #: 891-4399
891-4336
To: WENDELL HALL
From: ONR

Message: WEN DALL, THIS IS THE COPY OF THE MEMO
ABOUT THE TOTAL STATION UP TO DATE. IF YOU HAVE
ANY QUESTIONS, CALL ME @ 864-1489.

Pages to follow: 35

(memo through 10-2-97)

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918



Date: 10-17-97 Fax #: 891-4399

To: WENDALL HILL

From: DNR

Message: UPDATE OF MEMO ABOUT TOTAL STATION

Pages to follow: 8

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918



Date: 9-26-97 Fax #: 573-526-3350
To: ALAN REINKEMEYER, MO. DEPT. OF NATURAL RESOURCES
From: KAREN CHANDLER

Message: ALAN, THIS IS A COPY OF THE MEMO ABOUT
THE TOTAL STATION UP TO THE PRESENT. IF YOU HAVE
ANY QUESTIONS, GIVE ME A CALL @ 417-864-1489

Pages to follow: 31

(memo through Friday morning 9/26/97)

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923
Fax: 417/864-1918



Date: 9-26-97 Fax #: 831-6258
To: LEE SCHAEFER, SUNBELT
From: KAREN CHANDLER

Message: LEE, THIS IS A COPY OF THE MEMO ABOUT
THE TOTAL SERVICE STATION ON SUNSHINE. IF YOU HAVE
ANY QUESTIONS, GIVE ME A CALL @ 864-1489

Pages to follow: 31

(memo up to Friday afternoon 9-26-97)

Public Works Department

Surveillance Enforcement and Billing
Sewer Maintenance
1216 W. Nichols
Springfield, MO 65802

Phone: 417/864-1923

Fax: 417/864-1918

CITY of
SPRINGFIELD



Date: 9-26-97 Fax #: 314 692-8810

To: CHERYL HAINES, TERRACON

From: KAREN CHANDLER

Message: CHERYL, THIS IS A COPY OF THE MEMO (TO THE
PRESENT) ABOUT THE TOTAL STATION ON SUNSHINE ST.
IF YOU HAVE ANY QUESTIONS, GIVE ME A CALL AT

Pages to follow: 36 417 864-1489

(memo through Thursday 9/25)

new job titles and deleting 14 existing job titles; providing pay adjustments and benefit changes for employees on the PAT, CTL, LES, FPS and DHS pay schedules as contained herein; by creating a new Information Systems Department of the City; and declaring an emergency. This bill was amended and approved with one abstention.

CONSENT AGENDA - ONE READING BILLS. CITIZENS MAY REMOVE FROM CONSENT AGENDA AND SPEAK. MAY BE VOTED ON.
These bills were approved at the beginning of the agenda.

COUNCIL BILL 99-235. (Vanaman)

A resolution approving the plans, specifications and the bid of Hartman and Company, Inc., for construction of Grant Beach Park Box Repair.

COUNCIL BILL 99-236. (Manley)

A resolution approving the plans, specifications and the bid of Hartman and Company, Inc., for the construction of Drainage Improvements, National Avenue - Grand to Madison.

COUNCIL BILL 99-237. (Manley)

A resolution approving the plans, specifications and the bid of D. Ferguson Construction, Inc., for construction of Sidewalk Reconstruction - Phase II (1/4-Cent Sales Tax).

CONSENT AGENDA - SECOND READING BILLS. CITIZENS HAVE SPOKEN. MAY BE VOTED ON.

AMENDED COUNCIL BILL 99-209. (Gannaway)

Amending the Springfield City Code to make it unlawful for any person to engage in business and commercial activities within the public parks without the written permission of the Springfield/Greene County Park Board.

COUNCIL BILL 99-211. (Gannaway)

Authorizing the City Manager to enter into an agreement with the Springfield Convention and Visitors Bureau, Inc. to spend \$1,428,745 during the year 1999-2000 to provide a program to encourage tourism and conventions in the City.

COUNCIL BILL 99-215. (Rhodes)

Authorizing a license agreement with Avanti Petroleum, Inc. for the installation of groundwater monitoring wells within the public right-of-way at 1620 East Sunshine for the purpose of determining possible pollution from underground gasoline storage tanks.

COUNCIL BILL 99-216. (Manley)

1620 E SUNSHINE

AVANTI PETROLEUM, INC. • 3033 East Fir Avenue • Suite 202 • Denver, CO 80206 • (303) 320-0303 CHECK NO. **59767**

DATE	LOCATION	REFERENCE	GROSS AMOUNT	DISCOUNT	NET AMOUNT
05/01/1999	6215	9709090933	3,646.52	0.00	3,646.52
	6215	*Loc Total	3,646.52	0.00	3,646.52
* Total Check *			3,646.52	0.00	3,646.52

Vendor Number 6479



FEB 23 1999

Avanti Petroleum, Inc.
3033 East First Avenue
Suite 202
Denver, CO 80206
(303) 320-0303 Bus.
(303) 320-1311 Fax

February 17, 1999

Karen Chandler, Industrial Pretreatment Program
City of Springfield, Department of Public Works
840 Boonville Avenue
Springfield, Missouri 65801-8368

RE: Location #6215
1620 E. Sunshine
Springfield, MO

Dear Ms. Chandler:

We are in receipt of your invoice in the amount of \$3,646.52 for "Costs to the City of Springfield" from September 7, 1997 to March 19, 1998. In order for us to process for payment, we would appreciate a more detailed analysis of the items performed by the individuals.

We are somewhat in question as to how Mr. Chandler spent 86 hours directly attributable to this location. In addition, we also need an explanation as to how 752 miles were attributed to this project. We do understand that there may be some costs reimbursable to the City of Springfield. However, we will need an explicit billing which shows what these individuals were doing and how it was directly attributable to the Sunshine project and not related to other City activities.

We await your response accordingly.

Respectfully,

Garry V. Woodman, A.I.A.
Director of Environmental and Development

GVW:ld

Attachment

Cc: Joletta Golik/Terracon

**Costs to the City of Springfield
September 7, 1997 to March 19, 1998**

Water and Sewer Costs:

Water - 450 ccf	\$ 908.39
Sewer - 450 ccf @ .85/ccf	<u>382.50</u>
	\$1,290.89

Personnel Costs:

	Burden Rate	Overtime Rate	Time at Site (hours)	
Chandler	16.50		72.00	\$1188.00
		24.75	14.00	346.50
Lyman	21.11		7.50	158.33
		31.67	8.00	253.36
Pabst	19.32		9.50	183.54
Corson	19.32		5.50	106.26
Jones	8.25		1.00	<u>8.25</u>
				\$2244.24

Equipment Costs

	Cost/Mile	Mileage	
4106 (Ford Pickup)	\$.072	752	\$54.11
4126 (Chevy Pickup)	\$.066	16	1.06
4127 (Chevy Pickup)	\$.047	8	<u>.38</u>
			\$55.58

Miscellaneous

Lumber, Galvanized Nails, and Handsaw used to construct curbs over firehose	\$55.84
--	---------

TOTAL COST	\$3,646.52
-------------------	-------------------

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. ☐ Addressee's Address
- 2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

MR. GARY WOODMAN
DIRECTOR OF ENV & DEV
AVANTI PETROLEUM INC
3033 EAST FIRST AVENUE
SUITE 202
DENVER CO 80206

4a. Article Number

2159 668 751

4b. Service Type

- ☐ Registered
- ☐ Express Mail
- ☐ Return Receipt for Merchandise
- ☒ Certified
- ☐ Insured
- ☐ COD

7. Date of Delivery

5.1.99

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X SP Manuel

PS Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

PS Form 3800, April 1995

Street & Number	
Post Office, State, & ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

US Postal Service
Z 159 668 751
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (See reverse)
Sent to



February 26, 1999

Mr. Garry V. Woodman
Director of Environmental & Development
Avanti Petroleum, Inc.
3033 East First Avenue
Suite 202
Denver, CO 80206


Certified No. Z 159 668 751

Dear Mr. Woodman:

I'm enclosing a copy of the memo which details the City of Springfield's detection and monitoring activities of the hydrocarbon product which entered the sanitary sewer from the Total Station at 1620 E. Sunshine. I'm also enclosing copies of bills which the City paid City Utilities for water, reports which explain the cost/mile of gasoline for the vehicles used and copies of the bills from the lumberyard where supplies were purchased to construct curbs over the fire hose.

If you have any questions, please don't hesitate to call me at 864-1489.

Yours truly,


Karen Chandler
Industrial Pretreatment Program

cc: Randy Lyman, Pretreatment Coordinator
File

01/13/98	20 min				
02/11/98	30 min				
02/12/98	25 min				
03/19/98	40 min				
TOTAL TIME	85 hrs 55min	15 hrs 30 min	9 hrs 30 min	5 hrs 25 min	1 hour

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. ☐ Addressee's Address
- 2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

JEFFREY BROWN
AVANTI PETROLEUM
1620 E. SUNSHINE
SPRINGFIELD MO
65804

4a. Article Number

2 159 668 499

4b. Service Type

- ☐ Registered ☒ Certified
- ☐ Express Mail ☐ Insured
- ☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

2-16-99

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

PS Form 3811, December 1994

102595-98-B-0223

Domestic Return Receipt

Z 159 668 499

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
Street & Number	
Post Office, State, & ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995



February 11, 1999

Mr. Jeffrey Brown, Mgr.
Avanti Petroleum
1620 E Sunshine
Springfield, MO 65804

Certified No. Z 159 668 499

Dear Mr. Brown:

On Sunday, September 7, 1997, personnel from the City of Springfield's Public Works Department received a report of flammable hydrocarbon products entering the City's sanitary sewer system in the 1600 block of south Fremont. The hydrocarbon products were traced back to the Total Food Store at 1620 E. Sunshine. The tanks and fuel lines were tested by Montgomery Metalcraft and they found that the no-lead line was leaking. They also found product in the ground around the line.

The ordinances of the City of Springfield provide for the recovery of the costs involved in the abatement of a violation under emergency conditions. By means of a copy of this letter, these costs are being certified to the Director of Finance as true and accurate costs incurred by the City of Springfield.

Attached to this letter is a detailed explanation of the costs incurred by the Public Works Department in the detection, monitoring and treatment of flammable hydrocarbon products in the sanitary sewer system until March 19, 1998. Payment of these costs should be made to the City of Springfield, and sent to:

Ms. Linda Russell
City of Springfield
Busch Building, Room 105
840 Booneville
Springfield, MO 65802

Due to the nature of the problem, further action may be required to protect the health, life and property of those affected by the migration of lost hydrocarbon product.

1620 E SUNSHINE
DEPARTMENT OF PUBLIC WORKS
840 BOONVILLE AVENUE, P.O. BOX 8368 SPRINGFIELD, MISSOURI 65801-8368
(417) 864-1900

**Costs to the City of Springfield
September 7, 1997 to March 19, 1998**

Water and Sewer Costs:

Water - 450 ccf	\$ 908.39
Sewer - 450 ccf @ .85/ccf	<u>382.50</u>
	\$1,290.89

Personnel Costs:

	Burden Rate	Overtime Rate	Time at Site (hours)	
Chandler	16.50		72.00	\$1188.00
		24.75	14.00	346.50
Lyman	21.11		7.50	158.33
		31.67	8.00	253.36
Pabst	19.32		9.50	183.54
Corson	19.32		5.50	106.26
Jones	8.25		1.00	<u>8.25</u>
				\$2244.24

Equipment Costs

	Cost/Mile	Mileage	
4106 (Ford Pickup)	\$.072	752	\$54.11
4126 (Chevy Pickup)	\$.066	16	1.06
4127 (Chevy Pickup)	\$.047	8	<u>.38</u>
			\$55.58

Miscellaneous

Lumber, Galvanized Nails, and Handsaw used to construct curbs over firehose	\$55.84
--	---------

TOTAL COST	\$3,646.52
------------	------------

KC	KC	KC	RL	GP	BC	JJ
1.15 (10/10)	3.15 (9/8)	.30 (9/19)	3.50 (9/7)	2.15 (9/8)	2.40 (9/9)	1.00 (9/23)
.15 (10/11)	3.30 (9/8)	.15 (9/20)	2.00 (9/8)	2.40 (9/9)	.45 (9/22)	(1.00)
.15 (10/12)	1.55 (9/9)	.45 (9/22)	3.15 (9/8)	2.00 (9/10)	.45 (9/20)	
.30 (10/13)	1.15 (9/9)	.45 (9/22)	1.15 (9/9)	.45 (9/22)	.30 (11/24)	
.45 (10/14)	4.00 (9/9)	1.05 (9/23)	2.40 (9/9)	1.05 (9/25)	.45 (9/22)	
.50 (10/16)	1.05 (9/10)	1.00 (9/23)	2.00 (9/10)	.45 (9/18)	(5.25)	
.45 (10/17)	3.00 (9/10)	1.15 (9/24)	.30 (11/24)	(9.30)		
.45 (10/20)	3.00 (9/10)	1.05 (9/25)	(15.30)			
.50 (10/22)	.45 (9/11)	1.00 (9/25)				KC
.30 (10/21)	1.15 (9/11)	.45 (9/26)				.40 (12/22)
.45 (10/23)	1.30 (9/11)	.50 (9/26)				.45 (12/31)
.45 (10/24)	1.15 (9/11)	.45 (9/26)				.40 (1/5)
.15 (10/25)	.35 (9/12)	.15 (9/27)				.20 (1/6)
.45 (10/27)	1.15 (9/12)	.15 (9/28)				.45 (1/8)
.45 (10/31)	.50 (9/12)	.35 (9/29)				.20 (1/13)
.30 (11/03)	2.10 (9/13)	1.05 (9/29)				.30 (2/11)
1.15 (11/5)	.30 (9/13)	.50 (9/30)				.25 (2/12)
.45 (11/7)	.40 (9/14)	1.15 (10/1)				.40 (3/19)
.35 (11/14)	1.15 (9/15)	1.00 (10/2)				(85.55)
.45 (11/21)	1.00 (9/15)	1.25 (10/3)				
.35 (11/25)	.45 (9/16)	.30 (10/6)				
.40 (11/26)	3.15 (9/16)	.50 (10/6)				
.10 (11/29)	.55 (9/17)	.30 (10/7)				
.55 (12/3)	.55 (9/17)	.50 (10/8)				
.35 (12/12)	.50 (9/18)	.45 (10/8)				
.40 (12/19)	1.25 (9/18)	1.20 (10/9)				

43 hrs
+ 2575 min

2575 min

42 hrs 55 min

CITY UTILITIES
OF SPRINGFIELD

September 9, 1997

SPRINGFIELD SEWER DEPT
PO BOX 8368
SPRINGFIELD, MO 65801

This will authorize you to obtain a 2" water meter from the Water Measurement Department and connect same to a fire hydrant located at 1828 S KENTWOOD.

The charge is to be the regular rate for water used, but not less than the monthly minimum charge. The minimum charge for the periods less than one (1) month will be pro-rated. The minimum charge for a 2" water meter is \$ 120.00 per month.

Monthly meter readings must be received at City Utilities by the 10th day of each month. Mail reading to: City Utilities, P.O. Box 551, Springfield, MO, 65801 - ATTN: Meter and Service Center, or call 831-8391. Failure to send meter readings in for four (4) consecutive months may result in termination of this service.

If a fire hydrant meter is maintained by the customer for periods longer than six (6) months, the meter must be returned to the Meter and Service Center, 2115 W. Grand and exchanged for a new meter every six months. Failure to do so may result in termination of this service.

This fire hydrant meter must be connected each time water is taken from a fire hydrant. Failure to do so is and will be considered stealing. Anyone caught stealing water will be subject to prosecution by City Utilities.

This meter is equipped with check valves to prevent back siphonage into the water system. None of the valves or fittings attached to this meter shall be detached or dismantled in any way. Although this meter, with fittings, is designed to prevent backflow of any non-potable substance into the water system, the user of this meter is responsible to also take necessary precautions to prevent pollution of any kind to the water system. One such precaution is to keep the hose ends from being submerged in any vessel. This will prevent any liquid from being siphoned into the drinking water.

Before the fire hydrant meter is attached to the hydrant, the hydrant should be flushed for a couple of minutes. After the meter has been attached, the hydrant should be opened all the way, opening in the direction of the arrow - (closing in the opposite direction). To control the water flow, use shut-off valve on meter attachment. The meter should be removed after each use and not left on hydrant over night. The meter should not be allowed to freeze or damage may occur. Any meter or fire hydrant damage, because of misuse or neglect, will become the liability of the user.

Steven P. Floyd

Steven P. Floyd
Superintendent
Meter and Service

SPF/wp

c: file

Time: 3:24 PM

Meter #: 9505562

Present mtr rdg: 2086

F.H. wrench: yes

Picked up by: RANDY LYMAN O.K. Per: JH

9/8- 6:30 pm 5.30 hrs 300 + 30 min 330 min

9/9 24 hrs 1440 min

9/10 24 hrs 1440 min

9/11 24 hrs 1440 min

9/12 8:55 a.m 8:55 hrs 480 + 55 min = 535 min

5185 min

X .35

181475

÷ 748 =

Sumdun 243 ccf

+ Kentwood 207 ccf
450 ccf

Call —

Toates

10/1/97 = 2293 ccf

+

mins. @ 35 gpm.

@ 1550 E. Sunshine



OF SPRINGFIELD 301 E. CENTRAL P. O. BOX 551 SPRINGFIELD, MISSOURI 65801-0551 (417) 831-8311 CUSTOMER SERVICE (417) 831-8311

SERVICE NAME AND ADDRESS 1828 S KENTWOOD FHYD BILLING DATE 9/19/97 DELINQUENT DATE 10/10/97 ACCOUNT NUMBER 1645-6476-00

SPFD SEWER DEPT

SUMMARY OF CHARGES

16-45

SERVICE	METER NUMBER	SERVICE PERIOD FROM	TO	NO. OF DAYS	METER READING PRESENT	PREVIOUS	TYPE	MULTIPLIER BTU FACTOR	USAGE KWH/THERM/CCF	AMOUNT
W1	9505562	9-9	9-17	8	2105	2086	ES		19	32.00 M
					ACCOUNT ENTRY FEE					15.00
					CURRENT BILL					47.00

RECEIVED

SEP 23 1997

SEWER OPERATIONS

PREVIOUS AMOUNT

PAYMENTS RECEIVED

= UNPAID BALANCE

TOTAL ADJUSTMENTS

+ CURRENT CHARGES

+ LATE PMT. CHARGE

= AMOUNT DUE

.00

.00

47.00

.00

47.00

E-ELECTRIC G-GAS W-WATER S-SEWER M-MINIMUM ES-ESTIMATED P-PRORATED C-CUSTOMER READING AR-ACTUAL READING SR-SPECIAL READING N-NO BILLING

19 CCF OF WATER = 14212 GALLONS

PROJECT SHARE-A WORTHY CAUSE
YOUR DONATION IS TAX DEDUCTIBLE

NON-DOMESTIC-INSIDE CITY LIMITS

WE ARE SCHEDULED TO
READ YOUR METER(S)
APPROXIMATELY 10/15/97

NO DEPOSIT

PLEASE DETACH LOWER PORTION AND RETURN WITH PAYMENT OR IF PAYING IN PERSON - BRING ENTIRE BILL



OF SPRINGFIELD 301 E. CENTRAL P. O. BOX 551 SPRINGFIELD, MISSOURI 65801-0551 (417) 831-8311 CUSTOMER SERVICE (417) 831-8311

A correct telephone number will help us better handle your call during electrical outages.

Our records indicate the phone number for this address is: 000-0000

If this number is incorrect, please enter the correct number here:

SERVICE ADDRESS 1828 S KENTWOOD FHYD BILLING DATE 9/19/97 DELINQUENT DATE 10/10/97 ACCOUNT NUMBER 1645-6476-00

CYCLE 16 BOOK 45

RECEIVED

SEP 23 1997

SEWER OPERATIONS

*****3-DIGIT 658



SPFD SEWER DEPT

PO BOX 8368

SPRINGFIELD MO 65801-8368

PROJECT SHARE DONATION

AMOUNT DUE

47.00

AMOUNT PAID (if different)

DO NOT WRITE BELOW THIS LINE

1645647600000004700000000000000004700164564760000000047000000047006<

11/96
TC-50

CITY OF SPRINGFIELD, MISSOURI
ACCOUNTS PAYABLE TRANSACTION

BATCH DATE:

1 0 3 0 9 7

A 20074

VENDOR NUMBER:

A 0 0 1 2 7 0 6 0

FINANCE NUMBER

VENDOR NAME
AND ADDRESS:

City Utilities
301 E. Central
Springfield MO 65801

DEPARTMENT NUMBER

DEPARTMENT: PW SS SM

MAIL ☒

RETURN TO:

FPO/PO/ENCUMBRANCE																	
LINE	NUMBER	LINE	INVOICE NUMBER		AMOUNT		P/C/N	FUND/ORG		ACCOUNT							
01	ACCT # 1645-6476-00		10-20-97		\$ 367.37		N	701814		3364							
02																	
03																	
04																	
05																	
06			1828 S Kentwood														
07			TOTAL Station														
08																	
09																	
10																	

TOTAL \$ 367.37

FOR FINANCE USE ONLY:

CHECK NUMBER IF MANUAL:

CHECKED BY:

APPROVED FOR PAYMENT:

Q R L

Department Head or Authorized Agent

Date

ITEM	FIXED ASSET INFORMATION		(Attach additional sheets if needed)
#1	LOCATION: (BLDG/ROOM NO.)		For Finance Use Only:
	ESTIMATED USEFUL LIFE: (3 YEARS OR MORE)		
	DESCRIPTION:		
	SERIAL NUMBER:		
	ASSIGNED TO LOW ORG NO.:		
	COST OF ITEM:		
	FIXED ASSET NUMBER OF ANY ITEM TRADE		
#2	LOCATION: (BLDG/ROOM NO.)		
	ESTIMATED USEFUL LIFE: (3 YEARS OR MORE)		
	DESCRIPTION:		
	SERIAL NUMBER:		
	ASSIGNED TO LOW ORG NO.:		
	COST OF ITEM:		
	FIXED ASSET NUMBER OF ANY ITEM TRADED		

11/96
TC-50

CITY OF SPRINGFIELD, MISSOURI
ACCOUNTS PAYABLE TRANSACTION

BATCH DATE:

112697

A 02 20094

VENDOR NUMBER:

A00127060

FINANCE NUMBER

VENDOR NAME
AND ADDRESS:

City Utilities
301 E. Central
Springfield Mo 65801

DEPARTMENT NUMBER

DEPARTMENT:

PW SS SM

MAIL



RETURN TO:

FPO/PO/ENCUMBRANCE																	
LINE	NUMBER	LINE	INVOICE NUMBER								AMOUNT	P/C/N	FUND/ORG	ACCOUNT			
01	ACCT # 1645-6476-00					1	1	-	1	3	-	9	7	\$494.02	11	701814	3364
02																	
03																	
04																	
05						1	8	2	8	S	K	e	n	t	w	o	o
06																	
07																	
08																	
09																	
10																	

TOTAL \$ 494.02

FOR FINANCE USE ONLY:

CHECK NUMBER IF MANUAL:

CHECKED BY:

APPROVED FOR PAYMENT:

[Signature]

Department Head or Authorized Agent

Date

ITEM	FIXED ASSET INFORMATION	(Attach additional sheets if needed)
#1	LOCATION: (BLDG/ROOM NO.) ESTIMATED USEFUL LIFE: (3 YEARS OR MORE) DESCRIPTION: SERIAL NUMBER: ASSIGNED TO LOW ORG NO.: COST OF ITEM: FIXED ASSET NUMBER OF ANY ITEM TRADE	For Finance Use Only:
#2	LOCATION: (BLDG/ROOM NO.) ESTIMATED USEFUL LIFE: (3 YEARS OR MORE) DESCRIPTION: SERIAL NUMBER: ASSIGNED TO LOW ORG NO.: COST OF ITEM: FIXED ASSET NUMBER OF ANY ITEM TRADED	



OF SPRINGFIELD 301 E. CENTRAL P. O. BOX 551 SPRINGFIELD, MISSOURI 65801-0551 (417) 831-8311 CUSTOMER SERVICE (417) 831-8311

SERVICE NAME AND ADDRESS 1828 S KENTWOOD FHYD		BILLING DATE 11/13/97	DELINQUENT DATE 12/ 2/97	ACCOUNT NUMBER 1645-6476-00
SPFD SEWER DEPT		SUMMARY OF CHARGES		22-00

SERVICE	METER NUMBER	SERVICE PERIOD FROM	TO	NO. OF DAYS	METER READING PRESENT	PREVIOUS	TYPE	MULTIPLIER BTU FACTOR	USAGE KWH/THERM/CCF	AMOUNT
W1		10-16	11- 4	19	2293	2293	AR		0	76.00
					CURRENT BILL					76.00
					PRIOR BALANCE					4.70
					UNMETERED WATER USAGE					413.32
IF NOT PAID IN 30 DAYS FROM BILLING DATE - AMOUNT DUE WILL BE										543.42

PREVIOUS AMOUNT 372.07	-PAYMENTS RECEIVED 367.37	=UNPAID BALANCE 4.70	TOTAL ADJUSTMENTS 413.32	+ CURRENT CHARGES 76.00	+ LATE PMT. CHARGE .00	= AMOUNT DUE 494.02
E-ELECTRIC G-GAS W-WATER S-SEWER M-MINIMUM ES-ESTIMATED P-PRORATED C-CUSTOMER READING AR-ACTUAL READING SR-SPECIAL READING N-NO BILLING						

*** FINAL BILL ***

RECEIVED
NOV 18 1997
SEWER
OPERATIONS

NON-DOMESTIC-INSIDE CITY LIMITS

NO DEPOSIT

PLEASE DETACH LOWER PORTION AND RETURN WITH PAYMENT OR IF PAYING IN PERSON - BRING ENTIRE BILL



OF SPRINGFIELD 301 E. CENTRAL P. O. BOX 551 SPRINGFIELD, MISSOURI 65801-0551 (417) 831-8311 CUSTOMER SERVICE (417) 831-8311

A correct telephone number will help us better handle your call during electrical outages.

Our records indicate the phone number for this address is: 000-0000
If this number is incorrect, please enter the correct number here:

SERVICE ADDRESS 1828 S KENTWOOD FHYD	BILLING DATE 11/13/97	DELINQUENT DATE 12/ 2/97	ACCOUNT NUMBER 1645-6476-00
CYCLE 22 BOOK 0			

*****3-DIGIT 658



SPFD SEWER DEPT
PO BOX 8368
SPRINGFIELD MO 65801-8368

PROJECT
SHARE
DONATION

AMOUNT DUE

494.02

AMOUNT PAID (if different)

\$

DO NOT WRITE BELOW THIS LINE

164564760000004940200000047000000760016456476000000494020000076001<

MEEK'S SUNSHINE ST.
 3250 E SUNSHINE
 (417)-883-3636
 SPRINGFIELD, MO 65808



SOLD TO

SHIP TO

CASH SALE
 SUNSHINE

CASH SALE
 SUNSHINE

IMPORTANT: ALL MERCHANDISE RETURNED SUBJECT TO A RESTOCKING CHARGE.
 SEE REVERSE SIDE FOR TERMS & CONDITIONS.

ACCOUNT #	CUSTOMER P.O. #	TERMS	ORDER #	ORDER DATE	SLSMN	INVOICE #	INVOICE DATE
CASHS		CASH SALE	4798	09/09/97	HSE	3315	09/09/97
ORDERED	B/O	SHIPPED	U/M	DESCRIPTION		PRICE	AMOUNT
1	0	1	BX	8D 1# GALV RS PATIO/DECK NAIL 70944		1.190	1.1
6	0	6	EA	STUD, 2X4 92-5/8" UTILITY S24085PF3		1.920	11.52

THE ORDER TOTAL OF 13.49 HAS BEEN REDUCED BY THE FOLLOWING PAYMENTS:

DESCRIPTION	REFERENCE	EXPIR	AUTH CODE	DATE	PAYMENT AMOUNT
CASH				09/09/97	-15.00

SEP 9, 1997 15:39:17		OT: 858	0/ 1	FILED BY	CHKD BY	DRIVER	MERCHANDISE	12.71	
***** * INVOICE * ***** PAGE 1 OF 1				SHIP VIA			OTHER	0.00	
							TAX	6.100%	0.78
							FREIGHT		0.00
							TOTAL	DUE	-1.51
REC'D. BY				DATE:					

STATEMENT COPY/CASH SALE RECEIPT

MEEK'S KANSAS @MT VERNON
1551 W MT VERNON

SPRINGFIELD, MO 65802



SOLD TO

CASH SALE

SHIP TO

CASH SALE

IMPORTANT: ALL MERCHANDISE RETURNED SUBJECT TO A RESTOCKING CHARGE.
SEE REVERSE SIDE FOR TERMS & CONDITIONS.

ACCOUNT #	CUSTOMER P.O. #			TERMS	ORDER #	ORDER DATE	SLSMN	INVOICE #	INVOICE DATE
CASHS				CASH SALE	13921	09/09/97	HSE	7114	09/09/97
ORDERED	B/O	SHIPPED	U/M	DESCRIPTION			PRICE	AMOUNT	
1	0	1	BX	6D 1#GALV. BOX NAIL 32774			39570	1.390	1.39
1	0	1	EA	HANDSAW, 15" 9PT 15-334			11374	9.740	9.74
				SALE					
2	0	2	EA	1X4 8' WHITE PINE #3			1408WPF3	1.970	3.94
10	0	10	EA	2X4 8' SPF UTILITY			2403SPF3	2.390	23.90

THE ORDER TOTAL OF 41.35 HAS BEEN REDUCED BY THE FOLLOWING PAYMENTS:

DESCRIPTION	REFERENCE	EXPIR	AUTH CODE	DATE	PAYMENT AMOUNT
CASH				09/09/97	-60.00

SEP 9, 1997 14:31:41	DT: 922	0/ 1	FILED BY	CHKD BY	DRIVER	MERCHANDISE	39.97
SHIP VIA						OTHER	0.00
***** * INVOICE * *****						TAX 6.100%	2.38*
PAGE 1 OF 1						FREIGHT	0.00
REC'D. BY						TOTAL DUE	-18.65

STATEMENT COPY/CASH SALE RECEIPT

Vehicle BiFuel Report (Detail)

Date/Time Range = 09/01/97 12:00:00 AM - 03/31/98 12:00:00 AM
 Vehicle Filter = 4106
 Product Filter = F

Vehicle ID	Transaction Date	Transaction Time	Trans Meter	Trans Usage (A)	Trans Qty (B)	Trans MPG (A/B)	Prod Type	Price	Cost
4106	08/26/97	12:41:22 PM	19381						
	09/08/97	03:26:02 PM	19530(1)	149	10.20	14.6	FG7	\$1.070	\$10.914
	09/10/97	10:22:08 AM	19655(3)	125	7.75	16.1	FG7	\$1.070	\$8.293
	09/12/97	08:22:32 AM	19739(1)	84	10.60	7.9	FG7	\$1.070	\$11.342
	09/16/97	01:11:34 PM	19857	118	10.30	11.5	FG7	\$1.070	\$11.021
	09/22/97	01:59:29 PM	19972	115	10.55	10.9	FG7	\$1.010	\$10.656
	09/25/97	02:52:26 PM	20111	139	11.45	12.1	FG7	\$1.010	\$11.565
	10/02/97	09:29:37 AM	20248(2)	137	11.55	11.9	FG7	\$1.010	\$11.666
	10/06/97	10:05:52 AM	20341(1)	93	8.15	11.4	FG7	\$0.960	\$7.824
	10/13/97	09:17:23 AM	20459	118	10.20	11.6	FG7	\$0.960	\$9.792
	10/21/97	08:13:18 AM	20589(2)	130	10.20	12.7	FG7	\$0.920	\$9.384
	10/24/97	01:33:41 PM	20750(1)	161	10.95	14.7	FG7	\$0.920	\$10.074
	11/04/97	02:30:02 PM	20892	142	9.85	14.4	FG7	\$0.930	\$9.161
	11/12/97	03:46:24 PM	21039	147	11.25	13.1	FG7	\$0.930	\$10.463
	11/17/97	10:06:18 AM	21128	89	7.50	11.9	FG7	\$0.920	\$6.900
	11/21/97	09:32:07 AM	21279	151	9.50	15.9	FG7	\$0.920	\$8.740
	11/26/97	02:01:12 PM	21421	142	10.05	14.1	FG7	\$0.920	\$9.246
	12/05/97	11:09:02 AM	21555	134	10.80	12.4	FG7	\$0.920	\$9.936
	12/12/97	10:36:06 AM	21645	90	9.30	9.7	FG7	\$0.890	\$8.277
	12/18/97	08:31:54 AM	21793	148	8.45	17.5	FG7	\$0.890	\$7.521
	12/29/97	03:36:08 PM	21920	127	9.50	13.4	FG7	\$0.890	\$8.455
	01/08/98	10:42:47 AM	22051	131	10.40	12.6	FG7	\$0.890	\$9.256
	01/22/98	10:57:19 AM	22198	147	11.20	13.1	FG7	\$0.840	\$9.408
	02/02/98	11:13:00 AM	22341	143	9.75	14.7	FG7	\$0.840	\$8.190
	02/11/98	08:53:56 AM	22478	137	10.05	13.6	FG7	\$0.850	\$8.543
	02/26/98	09:05:17 AM	22629	151	10.40	14.5	FG7	\$0.870	\$9.048
	03/18/98	09:32:43 AM	22766	137	10.85	12.6	FG7	\$0.870	\$9.440
	03/25/98	09:46:34 AM	22906	140	11.50	12.2	FG7	\$0.820	\$9.430

Vehicle ID	Transaction Date	Transaction Time	Trans Meter	Trans Usage (A)	Trans Qty (B)	Trans MPG (A/B)	Prod Type	Price	Cost
	End: 03/25/98 09:46:34 AM		22906	Total FG7:		272.25	Miles/Gal:		12.9
	Begin: 08/26/97 12:41:22 PM		19381	Total _____:		0.00	Miles/Day:		16.72
	Miles: 3525			Total Product:		272.25	Cost/Miles:		\$0.072
				Average Price:		\$0.935	Period Cost:		\$254.545

Report Totals:

Usage 3525
 Odometers: 3525
 Hour Meters: 0

4106

Vehicle BiFuel Report (Detail)

Date/Time Range = 09/01/97 12:00:00 AM - 03/31/98 12:00:00 AM

Vehicle Filter = 4127

Product Filter = F

Vehicle ID	Transaction Date	Transaction Time	Trans Meter	Trans Usage (A)	Trans Qty (B)	Trans MPG (A/B)	Prod Type	Price	Cost
4127	08/20/97	01:11:43 PM	1013						
	09/10/97	09:19:08 AM	1252(1)	239	20.20	11.8	FG7	\$1.070	\$21.614
	10/29/97	11:07:14 AM	2027	775	20.30	38.2	FG7	\$0.920	\$18.676
	11/25/97	11:27:48 AM	2403	376	20.20	18.6	FG7	\$0.920	\$18.584
	12/17/97	01:37:13 PM	2705	302	20.25	14.9	FG7	\$0.890	\$18.023
	01/23/98	10:08:47 AM	3031	326	20.25	16.1	FG7	\$0.840	\$17.010
	02/13/98	09:34:04 AM	3355	324	20.30	16.0	FG7	\$0.850	\$17.255
	03/20/98	01:11:52 PM	3700	345	20.15	17.1	FG7	\$0.870	\$17.531
	03/20/98	01:11:52 PM	3700						
	08/20/97	01:11:43 PM	1013						
	08/20/97	01:11:43 PM	2687						
	End:		3700	Total FG7:	141.65			Miles/Gal:	19.0
	Begin:		1013	Total	0.00			Miles/Day:	12.67
		Miles:	2687	Total Product:	141.65			Cost/Miles:	\$0.047
				Average Price:	\$0.909			Period Cost:	\$128.693

Report Totals:

Usage 2687
 Odometers: 141.650
 Hour Meters: 0

4127

Vehicle BiFuel Report (Detail)

Date/Time Range = 09/01/97 12:00:00 AM - 03/31/98 12:00:00 AM
 Vehicle Filter = 4126
 Product Filter = F

Vehicle ID	Transaction Date	Transaction Time	Trans Meter	Trans Usage (A)	Trans Qty (B)	Trans MPG (A/B)	Prod Type	Price	Cost
4126	08/12/97	10:48:18 AM	916						
	09/05/97	02:35:13 PM	1122(1)	206	14.00	14.7	FG7	\$1.070	\$14.980
	09/18/97	02:26:34 PM	1329(2)	207	18.00	11.5	FG7	\$1.010	\$18.180
	10/09/97	10:20:23 AM	1605(1)	276	17.15	16.1	FG7	\$0.960	\$16.464
	11/17/97	10:07:14 AM	1835(3)	230	17.00	13.5	FG7	\$0.920	\$15.640
	12/09/97	11:17:25 AM	2137(1)	302	19.80	15.3	FG7	\$0.890	\$17.622
	01/09/98	03:42:17 PM	2383	246	20.05	12.3	FG7	\$0.890	\$17.845
	02/03/98	08:34:36 AM	2654	271	20.15	13.4	FG7	\$0.850	\$17.128
	03/06/98	10:46:17 AM	2966	312	20.25	15.4	FG7	\$0.870	\$17.618
	End: 03/06/98	10:46:17 AM	2966	Total FG7:	146.40		Miles/Gal:	14.0	
	Begin: 08/12/97	10:48:18 AM	916	Total	0.00		Miles/Day:	9.95	
	Miles: 2050			Total Product:	146.40		Cost/Miles:	<u>\$0.066</u>	
				Average Price:	\$0.925		Period Cost:	\$135.477	

Report Totals:

Usage 2050
 Odometers: 146.400
 Hour Meters: 0

4126

Mr. Jeff Bird
September 29, 1997
Page 2

1. That the service connection from your business and the adjacent building be "sealed" to keep groundwater from infiltrating the sewer main. This will require excavation in and along East Sunshine and the city public works should be consulted on this issue. Wayne Latimore is the contact at 417-864-1925.
2. The recovery well should continue to be pumped at least twice a day for the next couple of weeks until your automated system is in place.
3. The vapor extraction well installed in the recovery trench should be put into operation.
4. Work with MDNR Hazardous Waste Program (HWP)/Tanks Section (Marty Kasper) to implement additional site characterization and cleanup. HWP Tanks should make this a top priority due to the serious nature of this release.

Items number one through four should be considered as requests necessary to abate the emergency. Please proceed immediately with the above actions. Contact Mr. R.D. Chorice at (417) 891-4300 and myself at (573) 526-3384 so that one of us can be available to oversee on-site activities.

Should you have any questions concerning this letter, feel free to contact me at (573) 526-3384.

Very truly yours,

ENVIRONMENTAL SERVICES PROGRAM



Alan J. Reinkemeyer
Environmental Specialist
Environmental Emergency Response Section

AJR/so

c: RD Chorice, Southwest Regional Office
Marty Kasper, Hazardous Waste Program
Cheryl Haines, Terracon Environmental, Inc.
Ted Hummel, Lindsey Morden Claim Services, Inc.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
FAX Transmittal Cover Sheet

Date of Fax: 9/29/97

- ☒ URGENT
☐ Priority
☐ Routine
☐ As Requested
☐ FYI

To: Wayne Latimore

From: Alan Runkemeyer
ESP

City of Springfield
(417) 864-1918 Phone: _____

(513) 524-3350 (513) 524-3349
FAX: _____ Phone: _____

SUBJECT: _____

COMMENTS: _____

RESPONSE EXPECTED: _____

Total # of pages sent (including transmittal sheet): 3

If problems with FAX call: (513) 524-3349

GASOLINE IN THE SANITARY SEWER - E. SUNSHINE

9-7-97 Sunday

9:40 p.m. - 1:30 a.m. (Monday) (Randy Lyman) 10 miles

Randy Lyman received a call from Ernie Carter at 9:40 about a possible problem with gasoline in the sanitary sewer. At 10:50 p.m. he met with Gary Brown, Fire Marshal and Dan Whisler, Battalion Chief, of the Fire Department. Randy got the following readings with the United Technologies Bacharach CGI "Sniffer":

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	90	37-38%	
	18	0%	
	19		Locking, did not "sniff."
	20	0%	
	17	0%	
	16	0%	
	15	0%	Sunshine.
	14	0%	Sunshine.
	12	0%	
	11	0%	
P-20 SW	78	0%	In front of Texaco Service Station at 1326 E. Sunshine.
	77	0%	
P-20 SE	91	7%	
	97	0%	
	100	0%	

Randy obtained meter readings between 10% and 20% in both lines on Fremont to the south of Bennett until 12:49 a.m. Dan Whisler and Gary Brown told Randy they didn't have anything east on Bennett on to Glenstone. They said the problem seemed to be isolated in the area of University and Stanford at Fremont and north. Dan Whisler said they got a call on this at noon Sunday, again at approximately 4:00 p.m. and at 9:30 p.m., when Randy was called. At 12:52 a.m. Randy checked the big main at Bennett which Kraft discharges to and got a reading of 0% L.E.L. The fire department placed barricades on the MH's on the east side of Fremont until morning. Battalion Chief Grover will be on duty tomorrow as Dan Whisler's shift ends at 7:00 a.m. Monday. City Utilities had turned off gas service to all homes on both sides of Fremont, from Sunshine to Bennett Street. Randy returned to the office about 1:30 a.m.

9-8-97 Monday

8:45 a.m. - 10:45 a.m. (R.L.) 8 miles

Randy checked the manholes and got the following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	90	5%	8:55 a.m.
	91	2%	9:08 a.m.

1620 E. SUNSHINE

At 9:10 a.m. Randy talked with the City Utilities gas supervisor and they were going to turn the gas back on at all of the houses where it was shut off last night. He checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	60	10%	9:20 a.m.
	61	10%	
	62	0%	9:23 a.m.
	63	0%	9:25 a.m.
	14	0%	Fremont. 9:30 a.m.
	15	0%	Fremont.
	36	10%	9:35 a.m.
	58	10%	9:36 a.m.

At 9:55 a.m. Randy talked with Kevin Harp of the C.U. gas department and then checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	10%	Sunshine.
	16	0%	
	17	7-8%	
	18	5-6%	
	19	2%	
	20	5%	
	14	0%	
	12	0%	
	11	0%	

Randy called Charles Collins of DNR, but he was not in. Wendall Hall was in a meeting at this time.

12:00 p.m. - 2:15 p.m. (Gene Pabst) 8 miles

Gene Pabst loaded four more barricades on his truck and went to Fremont and Sunshine to check the L.E.L.'s in the manholes. He got the following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	97	0%	No odor.
	91	0-1%	Slight odor.
	90	9-10%	Gasoline odor.
	63	0%	
	61	0%	Slight odor-sewer or gasoline.
	37	0%	
	36	0-1%	Opened lid and put barricade on it.
			Slight gasoline odor.
	15	4-5%	Fremont. Gasoline odor.
	14	0%	Fremont. No odor.
P-20 SW	54	0%	36" main.
P-20 SE	11	0%	

Map	Manhole	Reading (L.E.L.)	Comments
	12	0%	
	14	0%	Sunshine. Pulled cover, possibly slight gasoline odor.
	15	65%	Sunshine. Opened MH cover. Dipped out some water. Saw no product on water.
	16	15%	Opened lid.
	17	0%	
	18	0%	
	19	0%	
	20	0%	

Gene checked the sampling manhole on the west side of the Total station. He thought he could smell a faint gasoline odor. He had to open the lid to use the meter and got a reading of 0-1%, which then dropped back to 0%. Gene talked to Tori at Total, but she did not know of any problems at the station. He checked under every dispenser and found nothing. Tori ran a rough check of her records and couldn't find a product loss. She gave Gene the name of her supervisor, Connie Booth. Connie was off that day and Tori suggested he call her at home and leave a message. At 1:50 p.m., Gene rechecked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	10%	
	16	15-20%	

3:45 p.m. - 7:00 p.m. (Randy Lyman & Karen Chandler) 20 miles

At 4:00 p.m., Randy and I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	50%	Sunshine. With cover off.
	16	30-40%	With cover off.
	17	0%	With closed cover.
	18	0%	With closed cover.
	19	0%	Locking lid, did not check.

At 4:15 p.m. we talked to Connie Booth at Total. She said they have Terracon Environmental of St. Louis to handle this kind of problem. They have ordered a tank test for tomorrow. They had their semi-annual leak detector test done last Friday. Randy and I then checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	4:25 p.m.
	16	35%	4:27 p.m.
	15	65%	Sunshine. 4:30 p.m.
	91	0%	4:33 p.m.
	90	2%	4:35 p.m.
	12	0%	5:20 p.m.
	14	0%	Sunshine.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SW	6	0%	
	78	0%	5:30 p.m.

Randy and I went back to the office and loaded up some fire hose, the backflow preventor, etc. We returned to Sunshine street and opened up a fire hydrant above manhole 17 and let it run all night.

8:30 p.m. - 12:00 a.m. (K.C.) 15 miles

This evening I was driving by the Total station and noticed several fire department vehicles there. I stopped and talked to one of the firemen. He said there was a strong gasoline odor in the building and the management of Total had closed the station. I used the meter around the floor drain and the sink in the back room and got 0% L.E.L. I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0-2%	
	16	0-2%	
	15	5%	Sunshine. Gasoline odor.
	18	80%	

I went to the office to get the City truck and load up some barricades. After returning to Sunshine and Fremont, I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	100%	10:00 p.m. I opened the cover and put a barricade over it.
	17	0-2%	
	16	2%	Faint gasoline odor.
	15	2-5%	Sunshine. Gasoline odor.
	14	0%	Sunshine. Also checked MH at Pickwick and Sunshine, which is adjacent to MH 14 and got 0% L.E.L.
	12	0%	
	91	0%	
	90	0%	Strong sewer smell.
	36	0%	
	15	0%	Fremont.
	14	0%	Fremont. Strong sewer smell.
	11	0%	Also checked MH at Sunshine and Fremont which is adjacent to MH 11 and got 0% L.E.L.
	18	100%	10:46 p.m. I talked to Connie Booth at the Total station and gave her the meter readings.
	19	25-30%	Opened cover and put barricade on it.

Map	Manhole	Reading (L.E.L.)	Comments
	20	30%	I didn't have enough barricades to open MH 20.
	19	10%	11:07 p.m.
I went back to the service center and got more barricades so I could open MH 20.			
	20	25%	11:39 p.m. Opened cover and put a barricade on it.
	18	95%	11:44 p.m.

I talked to the cashier at Total and she said the odor was gone from the building and they had plugged the drains, etc. At 12:00 a.m. I called Dennis Grover, battalion chief at the fire department, and told him my findings. Neither of us could think of anything else to do at this time.

9-9-97 Tuesday

9:05 a.m.-11:00 a.m. (K.C.) 8 miles

This morning I checked manholes on Sunshine and Fremont and got the following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	15%	
	19	15-25%	
	20	0%	
	17	0-2%	Faint gasoline odor.
	16	0%	
	15	0-1%	Sunshine. Strong sewage odor, possibly faint gasoline odor.
	14	0%	Sunshine. Checked adjacent MH at Sunshine and Pickwick, 0% L.E.L.
	12	0%	
	91	0%	
	90	0%	Strong sewer odor.
	36	0%	
	15	0%	Fremont.
	14	0%	Fremont.
	11	0%	Checked adjacent MH at Sunshine and Fremont, 0% L.E.L.
18	50-100 %		

I talked to Connie Booth about the readings. Wendall Hall, MDNR, was at the Total Station at this time doing some sampling of from monitoring wells. I also talked to him about the readings. He asked me to check the Total's sampling manhole and the cleanout for Key Largo. I got a reading of 20% in Key Largo's cleanout and a reading of 50% L.E.L. in the sampling manhole, which I opened and put a barricade on. Wendall asked if I could scoop some water out of MH 18. There was some product on this water when we poured it out on the lot. He also asked if I could get some barricades or tall cones so he could block off part of Total's drive while he was

working.

11:15 a.m. - 12:30 p.m. (R.L. & K.C.) 7 miles

After load up some cones for Wendall Hall at the garage, Randy and I returned to the Total station. Randy dyed the station's sewer line and determined that it goes in above MH 18. We put cones across one entryway of the Total Station to slow down traffic. Wendall had gotten permission from Connie Booth to do this. At 11:45 a.m., I got the following meter reading:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	100% +	

3:00 p.m. - 7:00 p.m. (K.C.) 16 miles
 3:00 p.m. - 5:40 p.m. (R.L, B.C., & G.P.)

At 3:00 p.m. I returned to the Total station after loading up fire hose, barricades, etc.

At this time I got the following reading:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	20-25%	

I talked to Connie Booth and told her we were going to run water in above MH 18. At this time NDE Environmental and Precision Tank Testing Services were at the station testing the tanks.

At 4:00 I got the following reading:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	10%	

Gene Pabst and Bob Corson met me on Kentwood street. We ran the firehose from the hydrant to manhole 28 (we map Q-20). This hose had to go across one of the entrances to the Plaza Towers Shopping Center. Gene and Bob made ramps out of 2" x 4"s to go over the hose so people could drive over it. Randy got a water meter from the City Utilities Water Department and some fittings from the hardware store, so the hose would fit on it. The beginning reading on water meter #9505562 was 208690 (meter reads in cubic feet). At 5:40 I got the following meter reading:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	25-30 %	

I talked to Connie Booth and she said the testing showed the tanks were tight. The mid-grade and premium lines were tight. They still have to do the no-lead lines. I then checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	
	20	0%	
	17	0-2%	Gasoline odor.
	16	0%	
	15	0%	Sunshine.
	14	0%	Sunshine. Adjacent MH at Sunshine and Pickwick was 0% L.E.L.

12	0-1%	
91	0%	Readjusted barricade.
90	0%	Strong sewer odor.
36	0%	
15	0%	Fremont.
14	0%	Fremont.
11	0%	
18	15-25%	6:30 p.m.

I checked the fire hose installation on Kentwood and everything was in place.

9-10-97 Wednesday

9:10 a.m. - 10:15 p.m. (K.C.)

8 miles

This morning I went to the Total station. Montgomery Metalcraft had checked the lines and found that the no-lead line was leaking and there was product around it. Alan Reinkemeyer, with the MDNR's Environmental Emergency Response, was at the station. He said they had cut Total's sewer service line to the City's main. He also mentioned that they found pockets of free product at 3' and 10'. The reading in the manhole today was:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	5-10%	

He asked me to turn off the fire hydrant above MH 18 and see what happened. I shut off the fire hydrant on Kentwood at 9:25 a.m. The water meter reading was 0214320. I then checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	20	0%	
	19	0%	
	17	0%	Gasoline odor.
	16	0%	
	15	0%	Sunshine.
	14	0%	Sunshine. Adjacent MH reading was 0% L.E.L.
	12	0%	
	91	0%	
	90	0%	Strong sewer odor.
	36	0%	
	15	0%	Fremont.
	14	0%	Fremont.

10:45 a.m. - 1:45 p.m. (K.C.)

16 miles

11:30 a.m. - 1:30 p.m. (G.P. & R.L.)

At 10:45 a.m. I returned to the Total station. They were digging a trench in front of dispensers 1&2 and 3. I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	90%	11:10 a.m.
	17	0%	
	16	0%	
	19	0%	

The storm sewer manhole in front of Key Largo had a reading of 0%. Alan Reinkemeyer asked me to turn the fire hydrant back on above the manhole, which I did at 11:30 a.m. A couple of the wooden platforms that went over the hoses were broken. I called Gene Pabst and asked him if he would bring out a hammer and more nails. I moved the broken platforms onto the parkway. Gene and Randy brought more nails and repaired the platforms. At 12:45 p.m. I got the following reading:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	

Karen Schaefer and Richard Lee of Sunbelt were at the Total station at this time. They were looking at an odor problem in the building to the west of the station. Apparently there was a gasoline odor in two of the first floor restrooms. At 12:55 Gene and I went to Roosevelt Bank, across the street at 1605 E. Sunshine, to check the sumps in the lower level. We talked to Robert Davis, the manager of the bank, and checked all three sumps, which had readings of 0% L.E.L. on the meter. When we returned to the Total Station, Sunbelt was pumping water with some product on it out of the pit. Alan Reinkemeyer wanted us to try shutting off the fire hydrant on Kentwood again, which I did at 1:25 p.m. The water meter reading was 0214840. A couple of the wooden platforms were damaged again, so I set them all on the parkway.

2:30 p.m. - 5:30 p.m. (K.C.) 14 miles

I loaded up 5 more barricades back at the office to put over the fire hose which ran across the entryway to the Plaza Towers Shopping Center. I returned to Sunshine and Fremont Streets and checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	5%	They were loading up dirt at the station.
	19	0%	
	20	0%	
	14	0%	Fremont.
	15	0%	Fremont. Strong sewer odor.
	36	0%	
	90	0%	Strong sewer odor.
	91	0%	0%
	11	0%	
	12	0%	
	14	0%	Sunshine. Checked adjacent manhole and got 0% L.E.L.
	15	0%	Sunshine.
	16	0%	

17 0%
18 25-30%

I turned the fire hydrant on at Kentwood again. I talked to a couple of people in the Plaza Towers Leasing and Management office (they manage the shopping center) and told them we were going to have to block off one of the entryways to the parking lot while the fire hydrant was running. They didn't have any objections to this. Randy and I loaded up the wooden platforms in my truck. At 5:00 p.m. I got the following reading:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	15-25%	

When I returned to the Total station, I talked to Cheryl Haines, of Terracon; Karen Schaefer, of Sunbelt; and Alan Reinkemeyer, of MDNR about the readings and turning on the fire hydrant again.

9-11-97 Thursday

8:30 a.m. - 9:15 a.m. (K.C.) 8 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	5%	

When I arrived at the Total Station, I noticed that they had removed the piles of dirt that were there yesterday. I gave Allan Reinkemeyer the reading. I turned off the fire hydrant on Kentwood at 9:00 a.m. and moved the barricades off the firehose onto the parkway. The meter reading at this time was 0220380.

10:30 A.M. - 11:45 A.M. (K.C.) 8 miles

When I arrived at the station, they were removing more dirt from the trench. I gave Allan Reinkemeyer the copy of the information about the sewer line that Wayne Latimer made for him and then checked the following manholes on Sunshine and Fremont:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0-5%	10:50 a.m.
	19	0%	
	20	0%	
	17	0%	
	16	0%	
	15	0%	Sunshine.
	14	0%	Sunshine.
	12	0%	
	91	0%	

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	90	0%	

36	0%	
15	0%	Fremont.
14	0%	Fremont.

1:15 P.M. - 2:45 P.M. (K. C.) 10 miles

I checked the manholes on Sunshine and Fremont and got the following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	11	0%	
	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	
	17	0%	
	18	2.5%	2:00 p.m.
	19	0%	
	20	0%	

I talked to Alan Reinkemeyer, of DNR; Bryan Gatlin, of Terracon; Ted Hummel, of Lindsey Morden Claim Services, Inc.; and Connie Booth, of Total, about the meter readings.

Meter readings on Fremont were as follows:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	91	0%	
	90	0%	Strong sewer odor.
	36	0%	
	15	0%	
	14	0%	

3:15 p.m. - 4:30 p.m. (K.C.) 12 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	1%	

At this time, Alan Reinkemeyer wanted to close the lid of MH 18 and wait for a little while to see what happened. I checked the firehose installation on Kentwood and everything was in place. I looked at the firehose installation on Sunshine and everything was working correctly. At 4:00 p.m. I returned to the Total station and checked MH 18 again. The reading was 1-2% L.E.L. Alan and I opened it back up. I reported the reading to Alan Reinkemeyer, Bryan Gatlin and Connie Booth.

9-12-97 Friday

8:30 a.m. - 9:05 a.m. (K.C.) 8 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	

The trench was being filled back in when I arrived. I spoke with Lee Schaefer, of Sunbelt; Alan Reinkemeyer, of MDNR; and Bryan Gatlin, of Terracon. They put in a recovery well, which they will pump twice a day over the weekend and then once a day next week, unless things change. Alan asked me to check the manholes and if readings come back up, he will require the sewer main in this area to be insituformed. Apparently this is already a cleanup site and it will move up on the list. I called Randy and left a voice message about the reading. I turned off the fire hydrant on Sunshine at 8:55 a.m.

12:45 p.m. - 2:00 p.m. (K.C.) 10 miles

I checked manholes on Sunshine and Fremont and got the following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	11	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	
	17	0%	
	18	0%	

I talked to Bryan Gatlin, of Terracon; Connie Booth, of Total; Alan Reinkemeyer and another man from the DNR office. I told them I would check the manholes once a day over the weekend, unless something changed.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	
	20	0%	
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.
	14	0%	Fremont.

3:10 p.m. - 4:00 p.m. (K.C.) 11 miles

I checked the following manholes on Friday afternoon:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	
	19	0%	

Map	Manhole	Reading (L.E.L.)	Comments
	20	0%	

I gave Connie Booth and Bryan Gatlin my results. They were filling in the trench with gravel at this time. The fire hydrant installations on Sunshine and Kentwood looked alright.

9-13-97 Saturday

9:30 a.m. - 11:40 a.m. (K.C.) 8 miles

It was raining while I was checking the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	11	0%	Checked the manhole on Sunshine and Fremont which is adjacent to this one (0% L.E.L.)
	12	0%	It was raining while I was checking the manholes.
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	
	17	0%	
	18	5%	9:50 a.m. Manhole cover was closed when I arrived.

I went back to the office to get my truck so I could open the cover on MH 18 again.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	
	20	0%	
	18	0-1%	10:35 a.m.

The reading on manhole 18 went down after I opened the cover. I talked to Connie Booth about the readings. She said to call her if it came up. Connie thought someone probably closed the cover on manhole 18 last night when they were working around the dispensers. I checked the fire hose installation on Kentwood. One of the barricades holding the hose and one the cones were down, so I set them back up and checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.
	14	0%	Fremont.
	18	0%	11:07 a.m.

I told Jeffrey, who was working at the cash register in the Total Station, the meter reading. He said they pumped out the well at 7:30 this morning.

5:30 p.m.- 6:00 p.m. (K.C.)

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	Sewer odor
	18	0%	Sewer odor
	19	0%	

I also checked the storm sewer manhole in front of Key Largo and got a reading of 0% L.E.L. I gave the meter reading to the cashier at the Total Station. I checked the barricades on Sunshine and Fremont and the fire hose installation on Kentwood and everything was in place.

9-14-97 Sunday

10:50 a.m. - 11:30 a.m. (K.C.) 8 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	11	0%	Checked manhole at Sunshine and Fremont which is adjacent to MH 11 and got 0% L.E.L.
	12	0%	
	14	0%	Checked manhole at Sunshine and Pickwick which is adjacent to MH 14 and got 0% L.E.L.
	15	0%	Sunshine.
	16	0%	
	17	0%	Sewer odor. Fire hose installation is OK.
	18	0-1%	No gasoline odor in MH.
	19	0%	
	20	0%	

I also checked the storm sewer manhole in front of Key Largo and got 0% L.E.L. I told Jeffrey at Total about the readings. He said they pumped the groundwater an hour ago. I checked fire hose installation on Kentwood and everything was in place.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	91	0%	
	90	0%	
	15	0%	Fremont.
	14	0%	Fremont.
	36	0%	

9-15-97 Monday

8:45 a.m. - 10:00 a.m. (K.C.) 11 miles

Monday morning I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	11	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	
	17	0%	Fire hose installation OK.
	18	0-1%	No gasoline odor in sewer.

I talked to John Dixon and Connie Booth of Total about the readings. Personnel from Sunbelt arrived to pump out the well as I was leaving. I put the cap back on the cleanout of Key Largo's sewer line and checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	Closed lid.
	20	0%	Closed lid. Fire hose installation on Kentwood OK.
	91	0%	Closed lid.
	90	0%	Closed lid.
	36	0%	Closed lid.
	15	0%	Fremont. Closed lid.
	14	0%	Fremont. Closed lid.

1:00.p.m. - 2:00 p.m. (K.C.) 8 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Checked manhole at Sunshine and Pickwick which is adjacent to 14 and reading was 0% L.E.L.
	15	0%	Sunshine.
	16	0%	
	17	0%	
	18	1%	Slight gasoline smell in MH. The barricade over it was flattened, put it upright.

I gave the reading to John Dixon and also talked to Don Hatch of Sunbelt.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	20	0%	Fire hydrant installation on Kentwood OK.

15

Map	Manhole	Reading (L.E.L.)	Comments
	36	0%	Someone had moved barricade off MH to other side of yard, I replaced it.
	15	0%	Fremont.
	14	0%	Fremont. Removed barricade and put it on MH 18.

9-16-97 Tuesday

8:45 a.m. - 9:30 a.m. (K.C.) 6 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	Sunshine. Closed lid.
	16	0%	Closed lid.
	17	0%	Closed lid. Fire hose installation OK.
	18	2-7%	Told John Dixon the results. He didn't think they had pumped yet. It is very breezy today.
	20	0%	Fire hose installation on Kentwood OK.

1:15 p.m. - 4:30 p.m. (K.C.) 14 miles

The weather forecast for this evening predicted a lot of rain, so I decided to open the manhole covers again.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	5%	1:40 p.m.

I gave Jeffrey, of Total, my meter reading. I also talked to Don Hatch of Sunbelt. He said he had been pumping 300-350 gallons of water twice a day, where now he was pumping 700 gallons once a day.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	Opened MH cover.
	15	0%	Sunshine. Opened MH cover.
	16	0%	Opened MH cover.
	91	0%	Opened MH cover.
	90	0%	Opened MH cover.
	36	0%	Opened MH cover.
	15	0%	Fremont. Opened MH cover.
	14	0%	Fremont.
	12	0%	
	14	0%	Pickwick & Sunshine.

Map	Manhole	Reading (L.E.L.)	Comments
	19	0%	Opened MH cover.
	20	0%	Opened MH cover. Firehose installation on Kentwood OK.
	18	25%	2:55 p.m.

I told Jeffrey at the Total Station my reading. He said he would call Connie Booth. I also called Randy Lyman about the reading. I turned on the fire hydrant on Kentwood again (0220560, beginning reading today).

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	15%	3:40 p.m.

I gave Connie Booth my meter reading. She asked me to check the sampling manhole next to the building because there was a gasoline odor in that area. The reading in that MH was 5% L.E.L. Connie called Cheryl Haines, of Terracon, while I was in her office and I gave her my meter readings.

9-17-97 Wednesday

8:30 a.m. - 9:25 a.m. (K.C.) 10 miles

This morning I called Alan Reinkemeyer and left a voice message about the readings yesterday, because he had called me. Randy Lyman got a call this morning from Brad Marshall, who is with DSI (Diversified Systems International, Inc.). The company is a contractor for C.U. and they are replacing the gas line on Kentwood. He told Randy they would have to block off one lane of traffic on Kentwood and needed to open the lane where the fire hose and barricades were set up.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	Slight gasoline smell.
	18	2.5%	9:00 a.m.

I gave Connie Booth and John Dixon, of Total, the meter readings and they mentioned Sunbelt had pumped this morning. I turned off the fire hydrant on Kentwood at 9:10 a.m. The meter reading was 0227580. I moved the barricades away from the driveway in at the Plaza Towers parking lot. Some of the DSI personnel moved the firehose and the barricades. I went back to the Total station and talked to Don Hatch of Sunbelt. He said that last night between 5:30 and 7:30 he pumped 100 gallons of water out of the well and it had 1-2 gallons of product on it. He said the station is going to put in a permanent groundwater cleanup system.

1:45 p.m. - 2:40 p.m. (K.C.) 8 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	

Map	Manhole	Reading (L.E.L.)	Comments
	17	0%	Slight gasoline smell.
	18	0%	Slight gasoline smell.

I gave Connie Booth and John Dixon the meter reading. I also talked with Chuck Schaefer, of Terracon, who was at the station. Chuck had taken readings in the manhole about 3' below grade with Sensidyne tubes and got <0.03% and ≈30 ppm. He said he was going to install a vacuum system to pull out vapors from the area where the leak occurred, but in order for it to work properly a concrete cap would have to be poured over the gravel fill. I then checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	
	20	0%	Firehose installation still lying on parkway and the other lane is still closed.
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

9-18-97 Thursday

8:25 a.m. - 9:15 a.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	Sewer odor.
	18	0-1%	

I gave John Dixon the meter reading. I also talked with Chuck Schaefer of Terracon. He said they are going to put a concrete cap over the gravel so the vacuum pump system will work properly. His OVM reading was 11 ppm. I checked the firehose on Kentwood and it was still lying on the parkway.

1:15 p.m. - 2:40 p.m. (K.C.) 11 miles

Kevin Swearingen asked me to talk to the manager of Key Largo about his business hours. He said Bill Afholder of Insituform had called and they wanted to insituform the line either Tuesday or Wednesday evening. I spoke with Doug Sweet, the manager of Key Largo, about his hours. He said they are open 7 days a week, from 11:00 a.m. - 1:30 a.m. He also said they had activities planned at the bar on Tuesday and Wednesday evenings, and he had sent out flyers about them. I gave him Bill Afholder's number and asked him to call Bill about this. I called Kevin back and told him what I had learned.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	

I gave the meter reading to the cashier in the Total Station. I also spoke with Chuck Schaefer. He had the vacuum pump going, but no concrete cap over the gravel yet.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	
	20	0%	Checked firehose installation on Kentwood and it is still on the parkway.
	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	
	17	0%	Firehose installation OK.
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

9-19-97 Friday

I called Alan Rinkemeyer this morning and told him about the problem that Key Largo would have with shutting down on Tuesday or Wednesday evening.

12:45 p.m. - 1:15 p.m. (K.C.) 9 miles

On Friday afternoon I got the following readings in the manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	
	17	0%	Fire hose installation OK.
	18	0%	They have poured cement over the gravel fill in the trench. I gave John Dixon the meter reading.
	19	0%	
	20	0%	Fire hose installation looks OK.
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

9-20-97 Saturday

6:15 p.m. - 6:30 p.m. (K.C.)

It rained about .51 of an inch today. I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	
	17	0%	
	16	0%	

I gave the cashier at Total the meter reading for MH 18.

9-22-97 Monday

8:45 a.m. - 9:30 a.m. (G.P. & B.C.) 8 miles

This morning Kevin Swearingen told me that the Insituform company was going to line the pipe this evening. He said they would need to have access to a fire hydrant and would need a water meter. We thought they could use the meter we checked out for the hydrant on Kentwood Street. Bob and Gene removed the meter this morning. The reading on it at this time was 227580.

1:00 p.m. - 1:45 p.m. (B.C. & K.C.) 8 miles

This afternoon Bob Corson and I removed the backflow preventor that we installed on the fire hydrant on Sunshine Street, because the Insituform people need to use the fire hydrant this evening.

2:15 p.m. - 3:00 p.m. (K.C.) 10 miles

This afternoon I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine. Sewer odor.
	16	0%	
	17	0%	
	18	0%	2:35 p.m. Gave clerk at Total the meter reading.
	19	0%	
	20	0%	
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

9-23-97 Tuesday

This morning Alan Reinkemeyer called me about 10:00 a.m. and said they were done with the insituforming. He said Total's connection into the main was a little jagged and was taking some groundwater.

12:35 p.m. - 1:40 p.m. (K.C.) 7 miles

It has been raining steadily all day and was raining heavily while I checked the manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine. This manhole was taking a lot of rainwater.
	16	0%	Not taking much rainwater, below a storm grate.
	18	0%	1:00 p.m. Cover was closed when I got there, opened it again, told John Dixon the reading.
	20	0%	Cover under water, apparently closed, didn't check. I checked the firehose on Kentwood. Three cones were lying in the street so I put them upright.
	17	0%	Cover was closed when I got there, opened it again. A lot of runoff from the parking lot was running in it.
	19	0%	Cover was closed. Locking lid, didn't "sniff."

At 1:40 I talked to Alan Reinkemeyer, who was at the Total station, and he said they were going pump out the groundwater once a day. I went back to the garage to see if there were some sandbags to put around a couple of the manholes to keep out the excess rainwater.

2:00 p.m. - 3:00 p.m. (K.C. & James Jones) 7 miles

James Jones helped me load up some sandbags and we put them around manholes 15 and 17 on Sunshine Street. The bags diverted most of the rainwater from the manholes. We then checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

9-24-97 Wednesday

This morning at 10:25 a.m., Lee Schaefer, of Sunbelt, called and asked what we were going to do about the manholes. I said we were going to keep them open through the weekend because of all the rain we have had. He said he thought that would be a good idea because they have been pumping them twice a day, and the people that have been pumping them think they "smell hotter" although they haven't seen any obvious petroleum product on the water. Lee also said they have had to change a charcoal cannister, which indicates they are getting some product going through them. He said he would take a sample of the water when they pump it this afternoon and see if there is anything visible on the water. See also mentioned that they had treated 5,000 gallons of water and they are getting between 300 and 500 gallons every time they pump it.

The ending reading on the C.U. water meter that we borrowed was 0229340.

12:45 p.m. - 2:00 p.m.

(K.C.)

9 miles

On Wednesday afternoon, I got the following readings in the manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	Barricade was broken and lying on the parkway, set it back over the open manhole.
	17	0%	Insituform odor.
	18	0%	Gave cashier at Total the reading.
	19	0%	Cover was closed when I arrived, picked up barricade. Locking lid, did not "sniff."
	20	0%	Cover was closed when I arrived, picked up barricade. Kentwood Street closed, firehose looked O.K. from corner.

I went back to manhole 16 and put one of the barricades I picked up over the manhole and took the broken one.

91	0%	
90	0%	
36	0%	
15	0%	Fremont.

9-25-97 Thursday

1:00 p.m. - 2:05 p.m. (G.P. & K.C.) 11 miles

This afternoon, Gene Pabst and I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	Removed sandbags.
	16	0%	Faint gasoline smell.
	17	0%	Removed sandbags, faint gasoline smell. MH surcharged.
	18	5%	1:30 p.m. Gasoline smell. Gave John Dixon the results. He said he had also noticed the odor.
	20	10%	We went to Kentwood St. and got a couple of barricades.
	19	10-15%	This was reading when MH cover was first opened. Put a barricade over it. We then opened MH 20.
	19	3-4%	

3:00 p.m. - 4:00 p.m. (K.C.) 10 miles

It was very breezy this afternoon. I returned to Sunshine and Fremont and got the following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	Faint gasoline odor.
	17	0%	Gasoline odor.
	18	2-3%	3:30 p.m. Gasoline odor, gave John Dixon the reading.
	19	2%	Gasoline odor.
	20	0%	
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

9-26-97 Friday

This morning Larry Childress, who owns the building at 1610 E. Sunshine, called City Hall this morning to say that he was getting odors back in his building. This message was relayed to

Randy Lyman. Randy left a message with Alan Reinkemeyer about this.

10:15 a.m. - 11:00 a.m. (K.C.) 9 miles
This morning I checked the manholes on Sunshine and Fremont and got the following results:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0%	Faint gasoline odor.
	17	2.5 %	Gasoline odor.
	18	9-10%	10:35 a.m. Gasoline odor. Gave reading to the cashier at the Total Station.
	19	0%	Sewer odor.
	20	0%	
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.

I had a voice message from Alan Reinkemeyer at 11:08 a.m. about this situation. He said they were not able to seal Total's service line and the sewer main connection completely. This has resulted in groundwater coming up under the service connection from Total into the main and it can be seen on the video that was taken of it (he has a copy). Alan also mentioned possibly having the City excavate out the connection and seal it. He also left a voice message with Wayne Latimer about this. Randy and I talked with Wayne and he thought it would be better if Total's contractor handled the excavation, sealing, etc. He left a voice message with Alan Reinkemeyer.

At 1:35 p.m. I returned Alan Reinkemeyer's call. He said they are working on getting a cleanup started at this site. We discussed some of the problems with excavating along the sewer line. He asked if we could get a TV camera down Total's private sewer line to check it. He also mentioned having a meeting with some of people from DNR's underground storage tank program, Total's contractors and the City to see what solutions we could come up with.

1:50 p.m.-2:40 p.m. (K.C.) 11 miles

On Friday afternoon, I checked the manholes on Sunshine and got following readings:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	Faint gasoline odor?
	16	0%	Faint gasoline odor.
	17	0-1%	Faint gasoline odor.
	18	3-5%	2:15 p.m. Gasoline odor.

24

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	19	0%	Sewer odor.
	20	0%	

I gave John Dixon, of Total, the meter reading when I was there. He said they came by early this morning to pump out the groundwater. He thought they were only pumping once a day now.

3:00 p.m. - 3:45 p.m. (K.C. & B.C.) 8 miles

Bob and I put the water meter back on the fire hydrant on Kentwood in case the readings in the manholes on Sunshine Street come back up again.

9-27-97 Saturday

7:10 p.m. - 7:25 p.m. (K.C.)

On Saturday evening, I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	3-4%	Gasoline odor. Gave reading to cashier in Total.
	17	0%	
	19	0%	

9-28-97 Sunday

3:35 p.m. - 3:50 p.m. (K.C.)

On Sunday afternoon, I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	Gave the cashier in Total the reading.
	17	0%	

9-29-97 Monday

9:55 a.m. - 10:30 a.m. (K.C.) 9 miles

On Monday morning I closed the covers on the following manholes(wye map P-20 SE): MH 15 (Fremont); MH 36; MH 90 and MH 91. It was very breezy.

1:10 p.m. - 2:15 p.m. (K.C.) 8 miles

On Monday afternoon, I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	Sunshine.
	16	0%	Sewer odor.
	17	0%	Sewer odor.
	18	0%	1:40 p.m. Sewer odor. Gave Jeffrey, the cashier in Total, the reading.
	19	0%	
	20	0%	
	91	0%	
	90	0%	
	36	0%	
	15	0%	Fremont.
	14	0%	Fremont.

9-30-97 Tuesday

2:10 p.m. - 3:00 p.m. (K.C.) 11 miles

On Tuesday afternoon, I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	
	18	0%	Sunbelt was leaving as I arrived. Faint gasoline odor. Gave Jeffrey at Total the reading.
	19	0%	
	20	0%	

After checking MH's 19 and 20, I walked back to the Total Station and the two barricades on MH 18 were lying flattened out in the street. I set them up again. On the way home from work, I passed by the Total Station and the barricades were down again. I replaced one of them with the barricade that was over Total's sampling manhole.

10-1-97 Wednesday

1:00 p.m.-2:15 p.m. (K.C.) 12 miles

On Wednesday afternoon, I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	Sewer odor.
	16	0%	Sewer odor.
	17	0%	
	18	5%	Gasoline odor. Gave reading to cashier at Total.
	19	0%	
	20	0%	

While I was at the Total Station, I talked Kevin Arnold, from NB Environmental, Inc. (Atlanta, Ga.), who was there with a tanker truck. He said they are doing water and vapor extraction at the station today and tomorrow. They started today at 8:45 a.m. and had pumped about 1000 gallons. He thought their activity might have caused the reading in the manhole today. I checked the fire hose on Kentwood and some had disconnected the section that went across the driveway to the Plaza Towers Shopping Center. I then checked the following manholes on Fremont:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	MH 90	0%	
	MH 91	0%	
	MH 36	0%	
	MH 15	0%	
	MH 14	0%	

10-2-97 Thursday

1:10 p.m. - 2:10 p.m. (K.C.) 8 miles

On Thursday afternoon, I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	Sewer odor.
	16	0%	
	17	0%	
	18	0%	1:40 p.m. Gave John Dixon the reading.
	19	0%	
	20	0%	

I talked with Kevin Arnold, from NB Environmental and he said they had pumped about 1000 gallons today. Some product showed up in the well they were pumping today, so he thought they might pump again tomorrow.

10-3-97 Friday

1:10 p.m. - 2:35 p.m. (K.C.) 12 miles

On Friday afternoon, I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	14	0%	Fremont.
	15	0%	Fremont. Removed barricade.
	36	0%	Removed barricade.
	90	0%	Removed barricade and cones.
	91	0%	Removed barricade.
	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine. Sewer odor.
	16	0%	Sewer odor.
	17	0%	
	18	0%	2:00 p.m. Faint gasoline odor? Gave John Dixon the reading.
	19	0%	
20	0%	Barricade not on top of open manhole, readjusted it.	

I talked to Kevin Arnold while at the Total Station. He said they pumped about 1667 gallons of water today, but didn't get any visible product on it. I also checked the CU water meter on Kentwood and it looked okay. I left a couple of the barricades from Fremont Street here in case they are needed later.

10-6-97 Monday

9:15 a.m. - 9:45 a.m. (K.C.) 2 miles

On Monday morning I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	Closed cover.
	16	0%	Closed cover.
	17	0%	
	18	0%	9:40 a.m. Gave reading to cashier.
	19	0%	Sewer odor.
	20	0%	Barricade lying flat in street. Closed manhole cover and replaced barricade over it.

2:15 p.m. - 3:05 p.m. (K.C.) 11 miles

On Monday afternoon I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	
	18	0%	2:40 p.m. Sewer odor. Gave Jeffrey the reading.
	19	0%	
	20	0%	

The CU water meter on Kentwood looked okay.

10-7-97 Tuesday

9:20 a.m. - 9:50 a.m. (K.C.) 2 miles

This morning I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	
	18	0%	9:35 a.m. Sewer odor. Gave John Dixon the meter reading.
	19	0%	
	20	0%	

Sunbelt was pumping the recovery well when I arrived at the Total Station. Don Hatch said he pumped about 1600 gallons of water yesterday and about 10 gallons of gasoline out of the well.

10-8-97 Wednesday

1:45 p.m. - 2:35 p.m. (K. C.) 11 miles

It rained on Wednesday, and in the afternoon I checked the following manholes on Sunshine Street:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	Sewer odor. Taking water.
	18	0%	Gave John Dixon the reading.
	19	0%	The manhole was taking some water.
	20	---	Under water, didn't sniff.

3:00 p.m. - 3:45 p.m. (G.P. & K.C.) 10 miles

Gene and I put sandbags around manholes 17 and 19 to keep the rainwater out.

10-9-97 Thursday

2:10 p.m. - 3:30 p.m. (K.C.) 10 miles

This afternoon I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	Sewer odor.
	18	0%	Sewer odor. Gave John Dixon the reading.
	19	0%	
	20	---	Didn't sniff, MH covered with mud.

10-10-97 Friday

2:15 p.m. - 3:30 p.m. (K.C.) 12 miles

This afternoon I checked the following manholes:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	Sunshine.
	15	0%	Sunshine.
	16	0-1%	Opened cover.
	17	0%	Faint gasoline odor.
	18	0%	Faint gasoline odor, gave Jeffrey the reading. He didn't know if they had pumped today yet.
	19	0%	Sewer odor.
	20	0%	Water meter on Kentwood looks OK.
	91	0%	
	90	0%	

30

Map	Manhole	Reading (L.E.L.)	Comments
P20-SE	36	0%	
	15	0%	Fremont.
	14	0%	Fremont.

10-11-97 Saturday

5:20 p.m. - 5:35 p.m.

This afternoon, I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	16	0%	
	17	0-1%	Faint gasoline odor.
	18	2-3%	Strong gasoline odor in recovery well area. Gave cashier the reading.
	19	0%	

10-12-97 Sunday

4:05 p.m. - 4:20 p.m. (K.C.)

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	Gave cashier the reading, strong gasoline smell by the wells.

10-13-97 Monday

9:50 a.m. - 10:20 a.m. (K.C.) 4 miles

This morning I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	
	18	0%	10:15 a.m. Gave Jeffrey the reading. Sunbelt was pumping, no apparent gasoline on the water. Floor of manhole had some spots with rainbows on them.
	19	0%	
	20	0%	Barricade was lying on parkway. I

removed it. Meter on Kentwood
OK.

10-14-97 Monday

3:05 p.m. - 3:50 p.m. (K.C.) 9 miles

This afternoon I checked the following manholes on Sunshine:

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	
	16	0%	
	17	0%	Faint gasoline odor.
	18	0%	Faint gasoline odor. Gave cashier the reading.
	19	0%	

10-16-97 Wednesday

9:15 a.m. - 10:05 a.m. (K.C.) 9 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	Faint gasoline odor.
	18	2-3%	9:45 a.m. Gasoline odor, gave John Dixon the reading.
	19	0%	
	20	0%	

10-17-97 Thursday

9:55 a.m. - 10:40 a.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	Faint gasoline odor.
	18	0%	10:15 a.m. Gasoline odor. Talked to Connie Booth, she said they had just pumped.

Map	Manhole	Reading (L.E.L.)	Comments
P20-SE	19	0%	
	20	0%	Water meter installation on Kentwood looked okay.
10-20-97	Monday		
8:45 a.m. - 9:30 a.m.	(K.C.)		11 miles
Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	Closed cover. No odor.
	17	0%	Faint gasoline odor.
	18	0%	9:07 a.m. Gasoline odor by wells. Gave John Dixon the reading. Sunbelt was pumping. Said they hadn't seen any obvious product on the water.
	19	0%	No odor. Closed cover, removed sandbag.
	20	0%	Water meter installation on Kentwood okay.

1:40 p.m. - 2:30 p.m.	(K.C.)		11 miles
Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	16	0%	
	17	0%	Sewer odor.
	18	0%	Sewer odor.
	19	0-1%	Opened cover to check reading. Left open. Gasoline odor?

10-21-97 Tuesday

10:15 a.m. - 10:45 a.m.	(K.C.)		10 miles
Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	
	16	0%	
	17	0%	Sewer odor.
	18	0%	Gave reading to Nancy, the cashier.
	19	0%	

Rained a little early this morning.

10-23-97 Thursday

1:40 p.m. - 2:25 p.m.

(K.C.)

11 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	12	0%	
	14	0%	
	15	0%	
	16	0%	
	17	0%	
	18	0%	Sewer odor. I talked to Don Hatch, of Sunbelt. He said they won't be pumping anymore.
	19	0%	Put a sandbag back on the MH, as it is supposed to rain tonight.

10-24-97 Friday

12:45 p.m. - 1:30 p.m.

(K.C.)

11 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	
	16	0%	
	17	0%	
	18	0%	
	19	0%	1:10 p.m. Gave cashier the reading. Fire hose installation on Kentwood okay. Replaced barricade over hose and picked up a couple of cones out of the street.

10-25-97 Saturday

5:55 p.m. - 6:10 p.m.

(K.C.)

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0-1%	Slight gasoline odor. Put barricade back up over MH.
	19	0%	Rearranged sandbag.
	17	0%	

10-27-97 Monday

1:15 p.m. - 2:00 p.m. (K.C.) 9 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	
	16	0%	
	17	0%	
	18	0%	1:35 p.m. Faint gasoline odor. Gave the reading to Jeffrey, the cashier.
	19	0%	Fire hose installation on Kentwood okay.

10-31-97 Friday

9:45 a.m. - 10:30 a.m. (K.C.) 9 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	
	16	0%	
	17	0%	Faint gasoline odor?
	18	2-3%	10:10 a. m. Faint gasoline odor, gave cashier the reading.
	19	0%	Fire hydrant installation on Kentwood okay.

11-03-97 Monday

1:15 p.m. - 2:15 p.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	Removed barricade.
	16	0%	Removed barricade.
	17	0%	Sewer odor.
	18	0%	Gave reading to Jeffrey, the cashier.
	19	0%	

Removed the water meter from Kentwood. Reading was 0229390.

11-05-97 Wednesday

1:30 p.m. - 2:45 p.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	15	0%	
	16	0%	
	17	0%	Sewer odor.
	18	0%	Readjusted barricades. Gave reading to Nancy, the cashier.
	19	0%	

Removed three of the barricades and a section of fire hose on Kentwood Street.

11-07-97 Friday

1:20 p.m. - 2:05 p.m. (K.C.) 11 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	16	0%	
	17	0%	Sewer odor.
	18	0%	
	19	0%	Sewer odor.

11-14-97 Friday

1:10 p.m. - 1:45 p.m. (K.C.) 9 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	16	0%	
	18	0%	1:25 p.m.
	19	0%	
	17	0%	

11-21-97 Friday

10:55 a.m. - 11:40 a.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	16	0%	
	17	0%	
	18	0%	11:00 a.m. Gave reading to John Dixon.
	19	0%	

11-24-97 Monday

Randy Lyman and Bob Corson closed the lids on manholes 17,18, and 19 and removed the barricades.

11-25-97 Tuesday

11:25 a.m. - 12:00 p.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	1-2%	11:35 a.m. Gave reading to John Dixon.
	19	0%	

11-26-97 Wednesday

1:20 p.m. - 2:00 p.m. (K.C.) 11 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	1%	1:35 p.m.
	19	0%	

11-29-97 Saturday

5:10 p.m. - 5:20 p.m.

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	

12-03-97 Wednesday

12:50 p.m. - 1:45 p.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	Loaded up fire hose that was lying near this MH.
	18	0%	
	19	0%	

37

12-12-97 Friday

2:55 p.m. - 3:30 p.m. (K.C.) 9 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	

12-19-97 Friday

9:05 a.m. - 9:45 a.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	

12-22-97 Monday

3:20 p.m. - 4:00 p.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	

It rained Saturday and Sunday.

12-31-97 Wednesday

11:15 a.m. - 12:00 p.m. (K.C.) 9 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	Picked up the firehose on Kentwood.

01-05-98 Monday

2:15 p.m. - 2:55 p.m. (K.C.) 12 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	
	19	0%	

Rained Sunday evening and early Monday morning.

38

01-06-98 Tuesday

9:10 a.m. - 9:30 a.m. (K.C.) 5 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	

01-08-98 Thursday

10:00 a.m. - 10:45 a.m. (K.C.) 10 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	

It snowed today.

01-13-98 Tuesday

2:10 p.m. - 2:30 p.m. (K.C.) 5 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	18	0%	

02-11-98 Wednesday

9:45 a.m. - 10:15 a.m. (K.C.) 6 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	Closed sampling MH at the Total Station.

It rained over 2" before and after midnight.

02-12-98 Thursday

9:05 a.m. - 9:30 a.m. (K.C.) 8 miles

Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	

39

03-19-98 Thursday

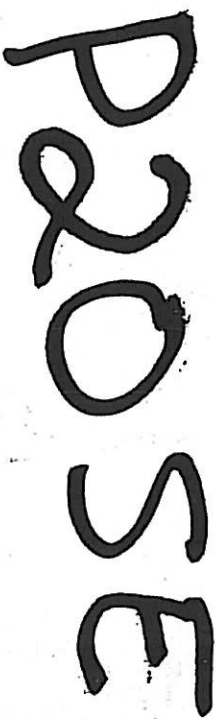
1:50 p.m. - 2:30 p.m. (K.C.) 9 miles

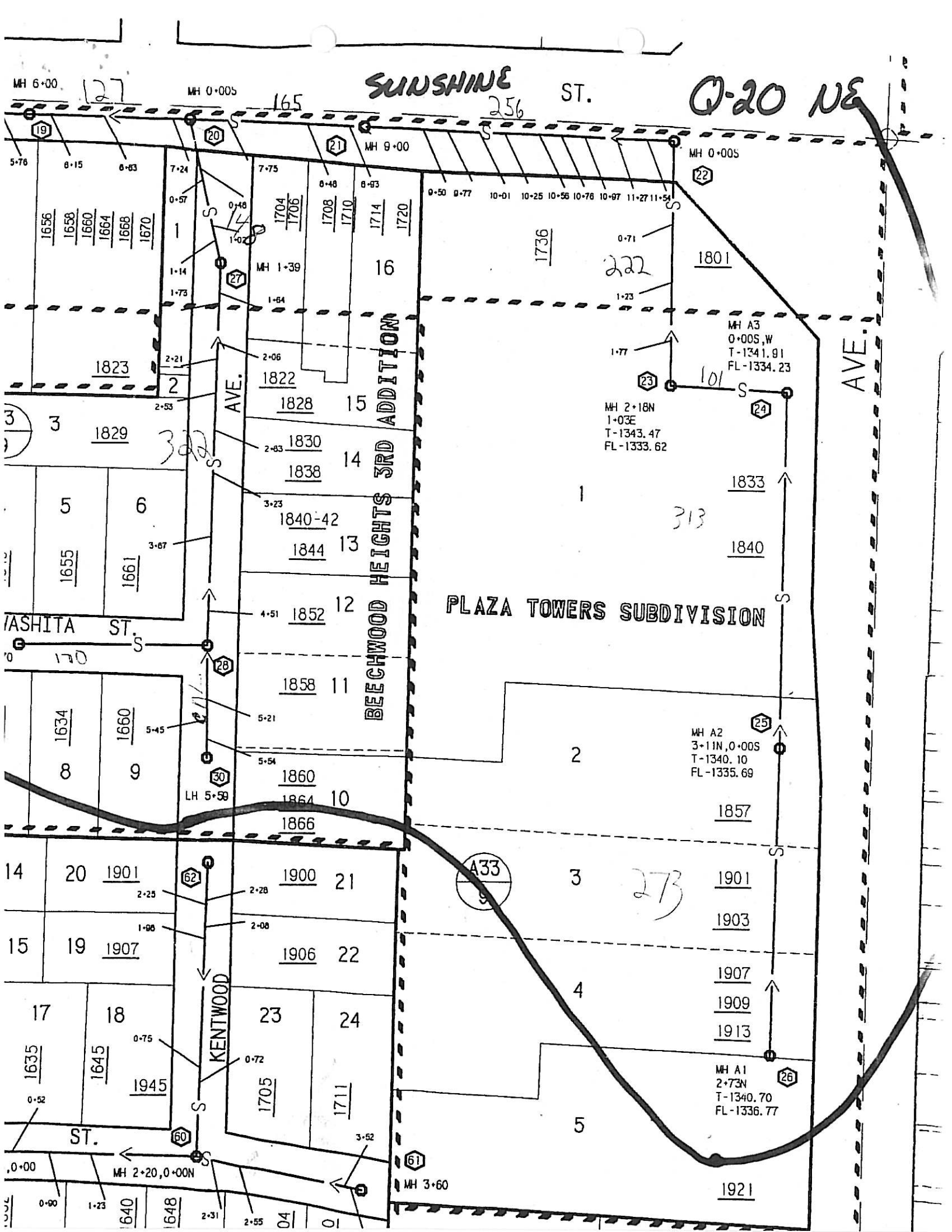
Map	Manhole	Reading (L.E.L.)	Comments
P-20 SE	17	0%	
	18	0%	



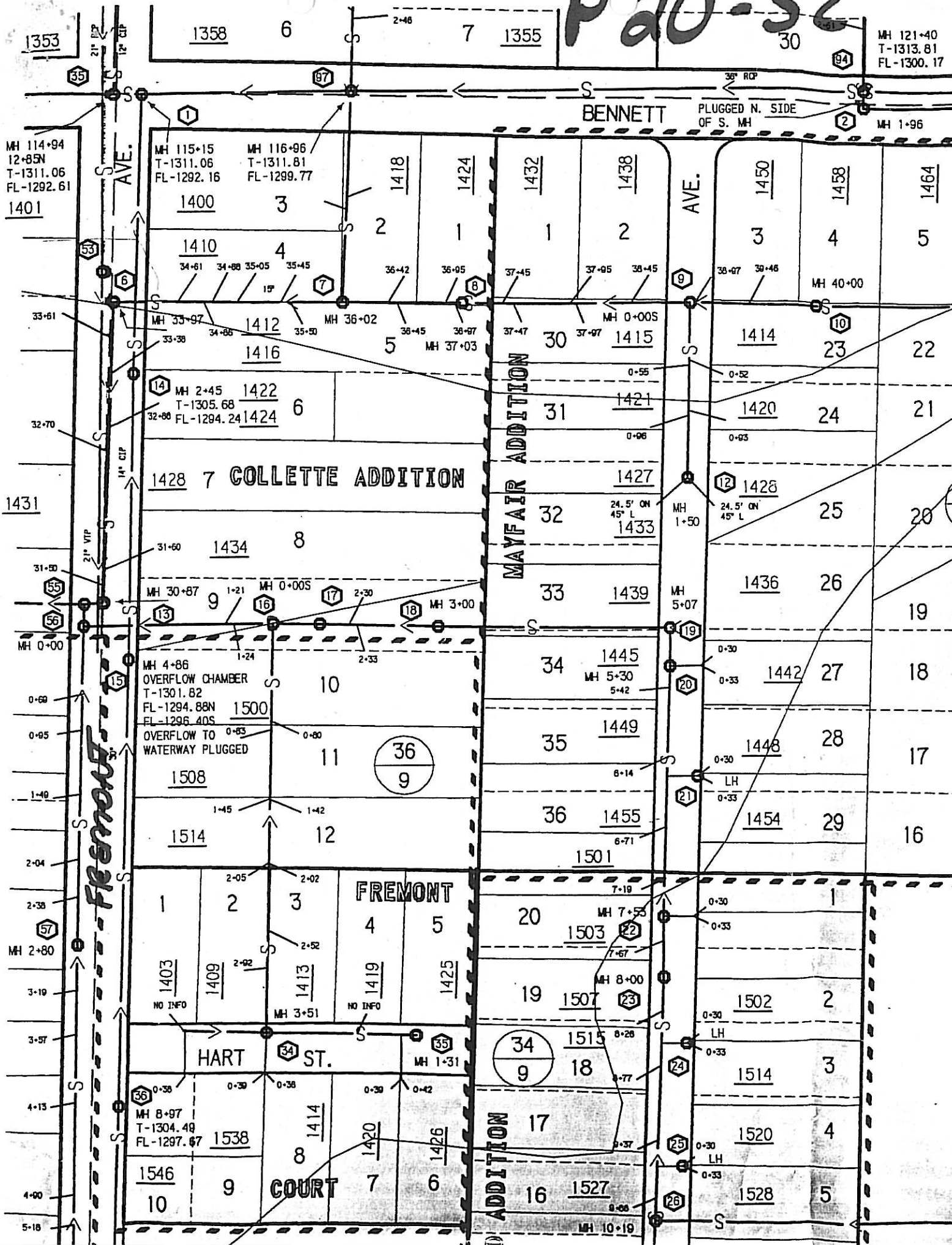
Karen Chandler

Industrial Pretreatment Section

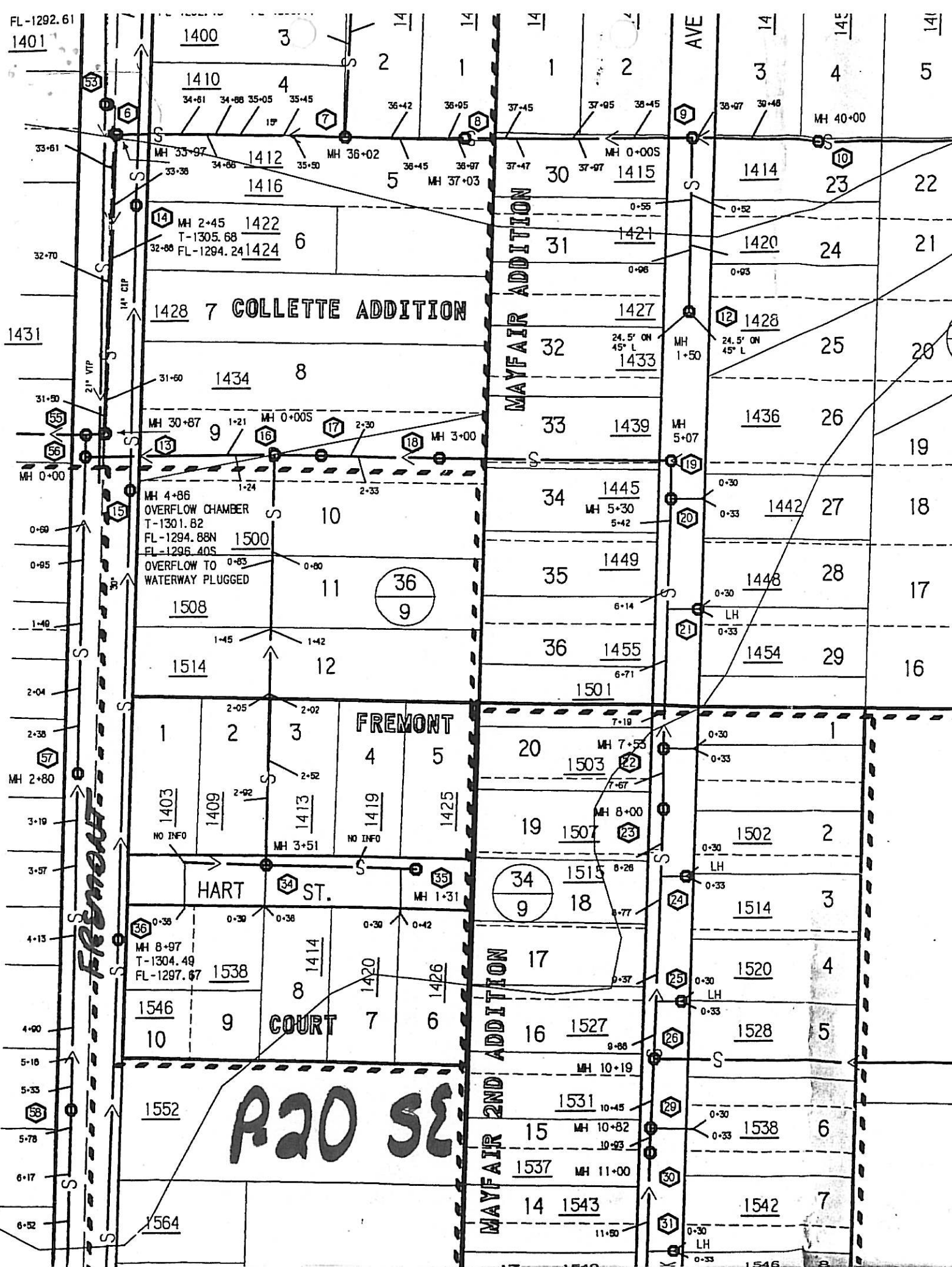


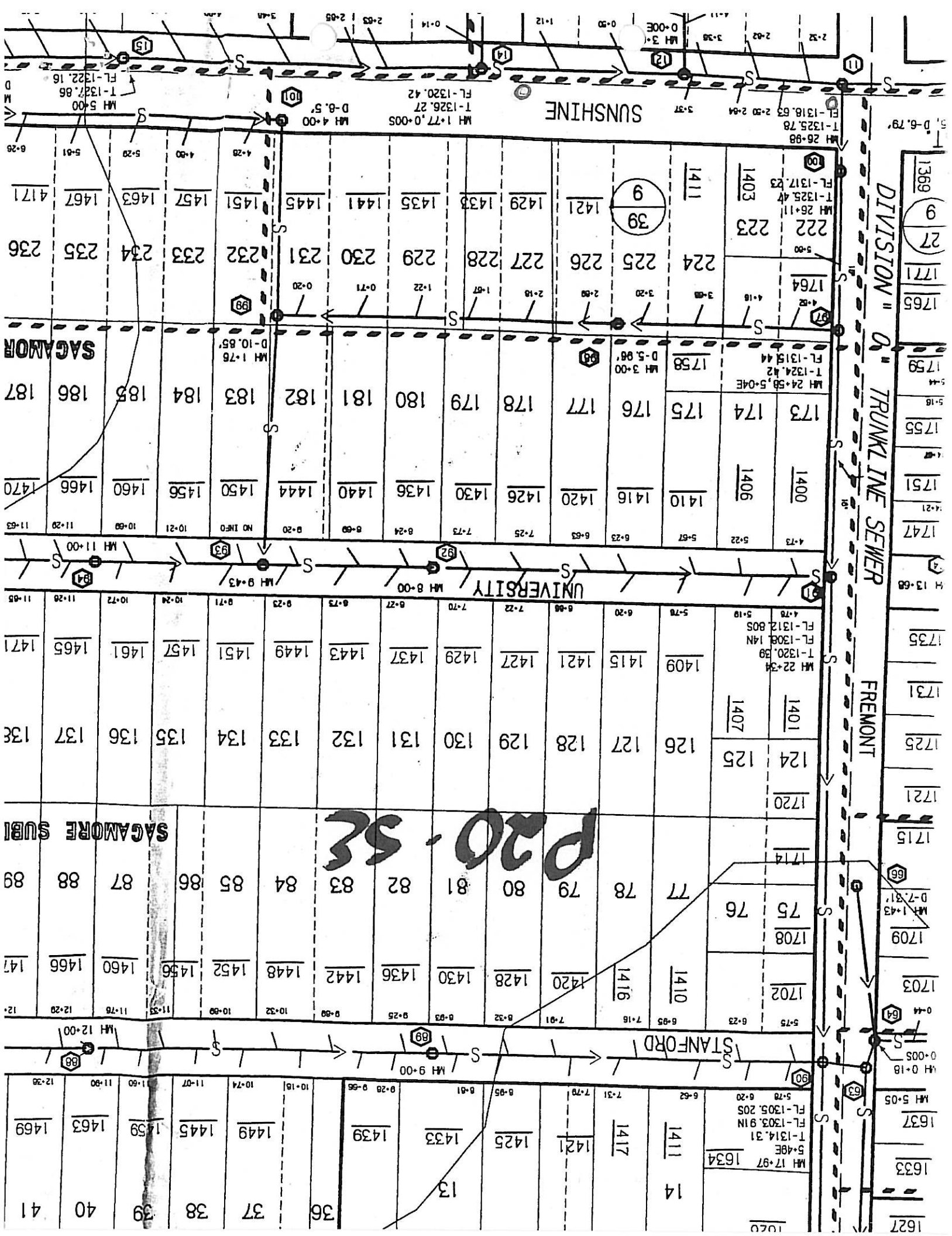


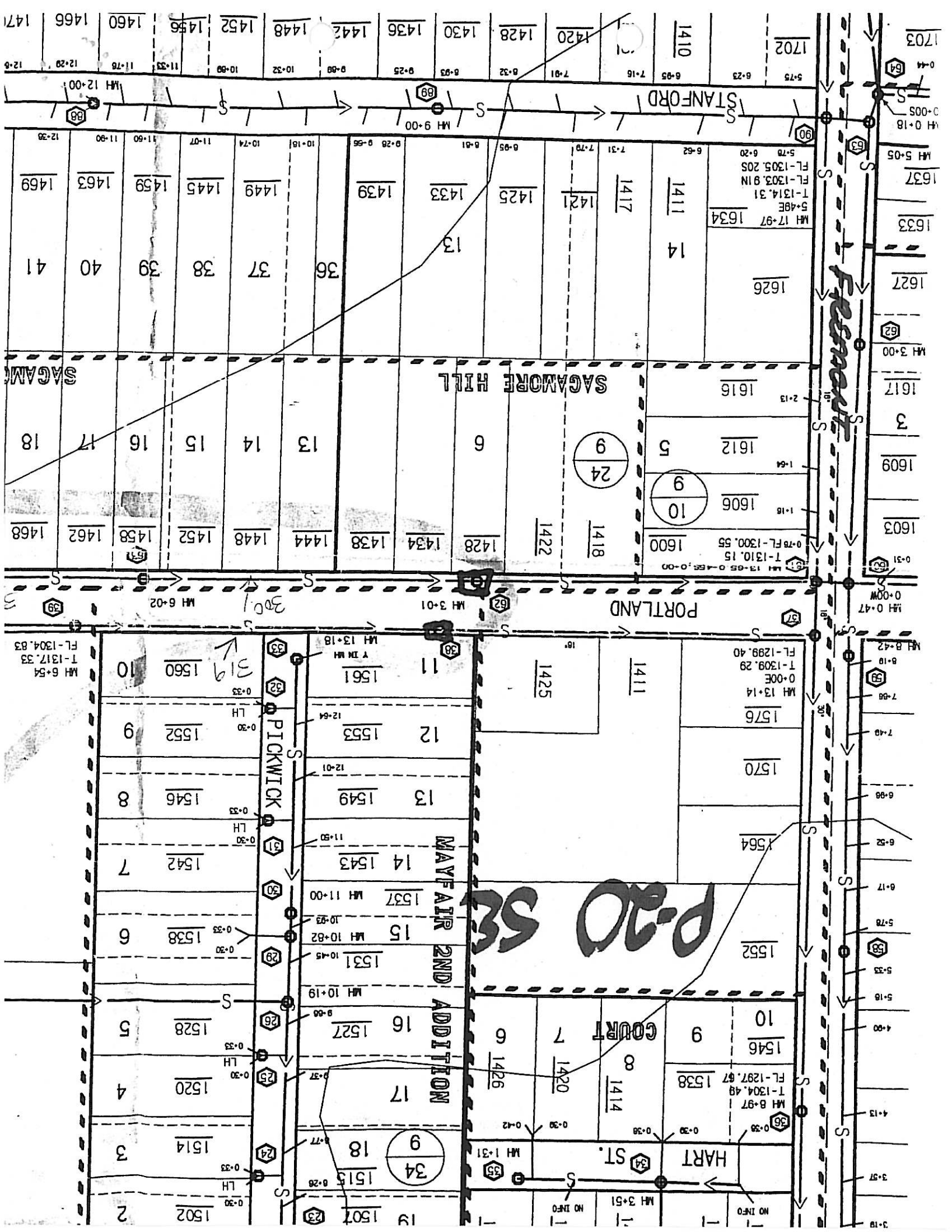
P 20-5E



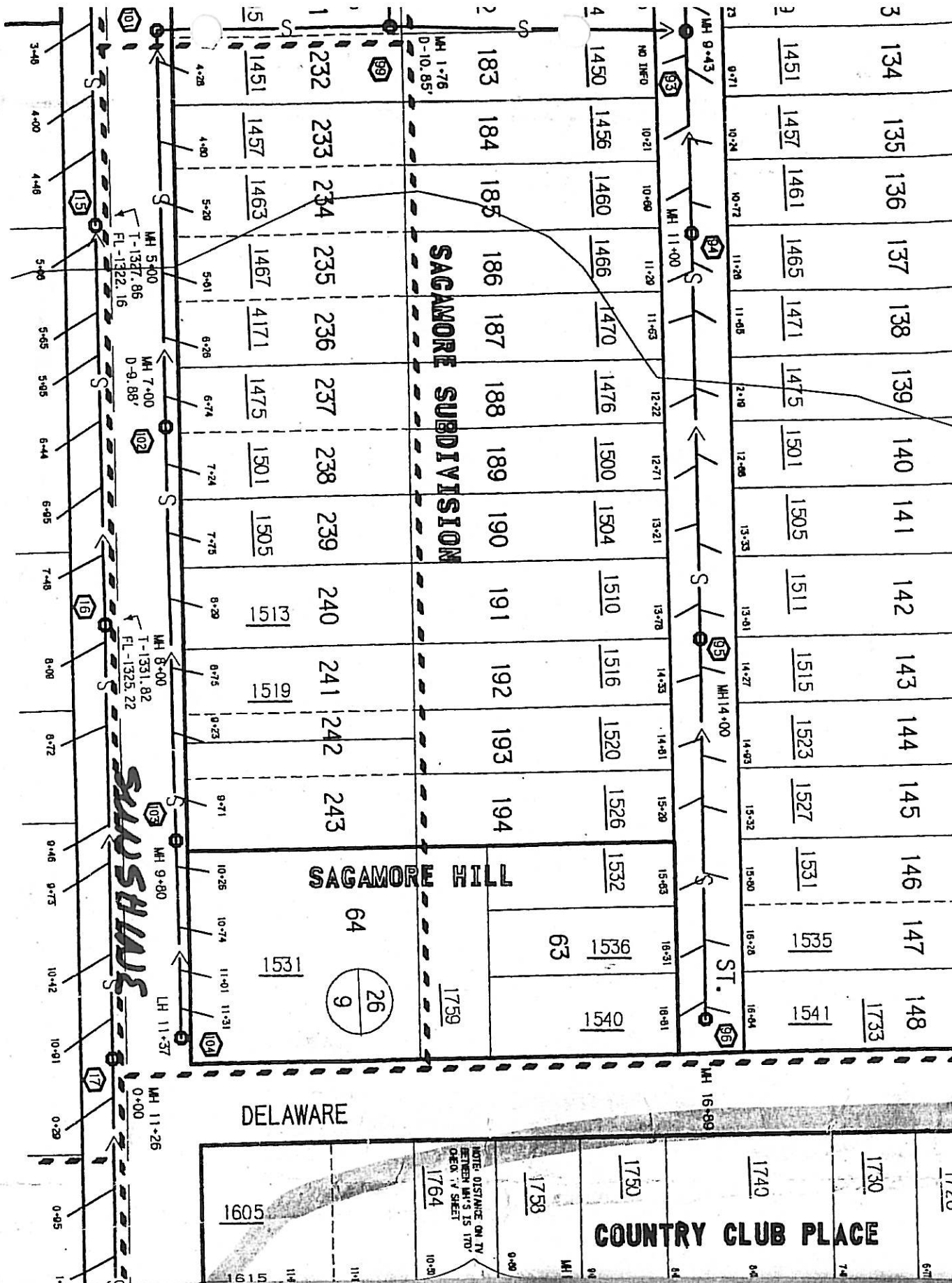
1401



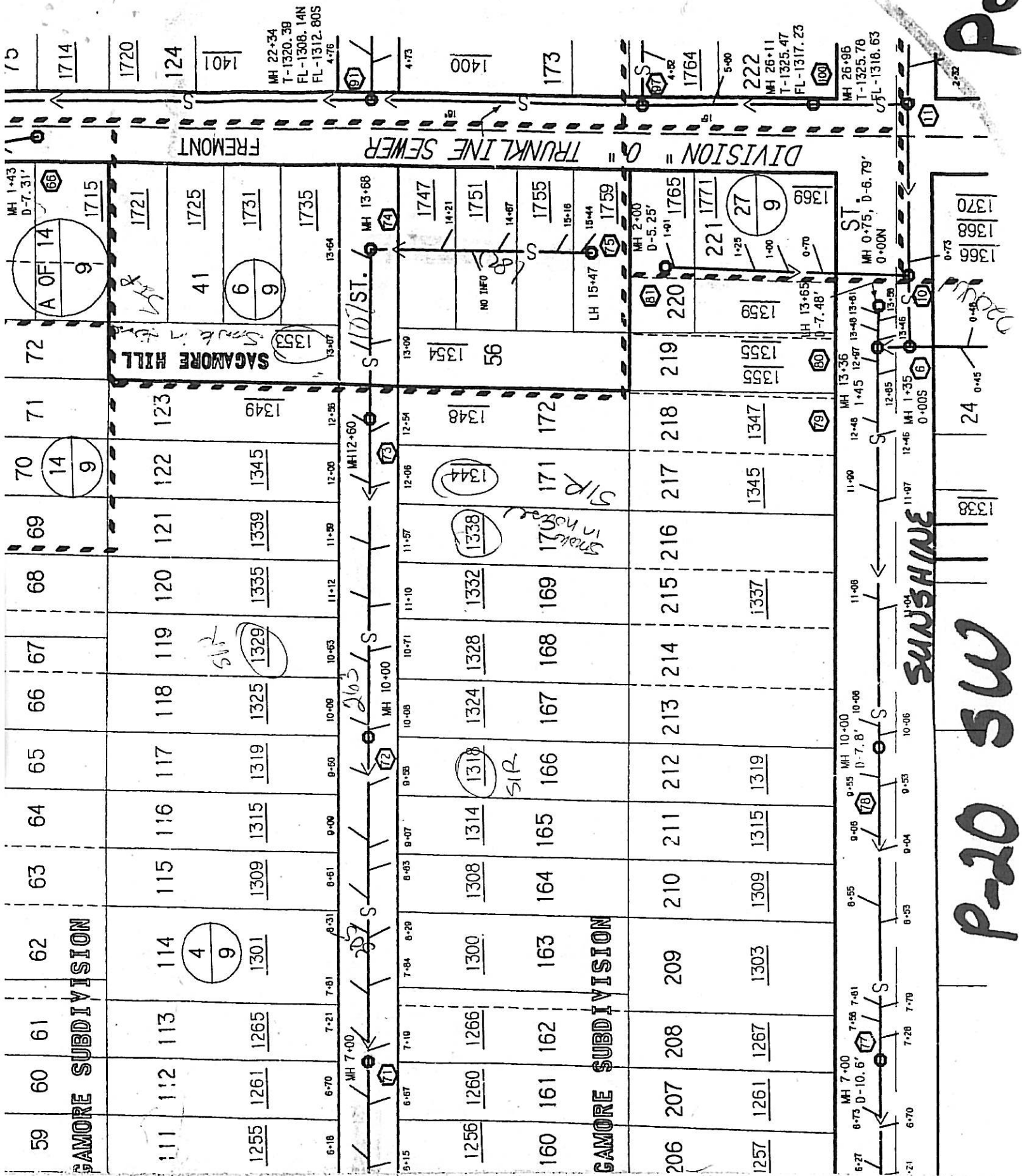




P20 52







五

P-20 53